

# An illustrated catalogue of the type specimens of Lepidoptera housed in the Zoological Museum Hamburg (ZMH): Part II. superfamily Papilioidea

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<http://zoobank.org/984E15D8-80E0-4B7D-A84F-92BB0AD4EA73>

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## Abstract

We provide an updated catalogue of the type material of the lepidopteran superfamily Papilioidea deposited in the Zoological Museum of Hamburg (ZMH). We report 414 specimens labelled as “types” belonging to nine species (all of valid names), 74 subspecies (44 valid names and 30 synonyms), 59 invalid infrasubspecific names under the ICZN code, and 23 specimens of 16 “in litteris” (= unavailable) names. Out of the 414 specimens labelled as “types”, 171 specimens are primary types (8 holotypes/lectotypes and 163 syntypes) and 80 are secondary types; 120 specimens are infrasubspecific and hence invalid and are considered as “original specimens”; and 43 specimens are treated here as “Non-type” specimens (topotype). We present a full bibliography of the original descriptions and illustrations for all of these taxa, aiming to provide a comprehensive taxonomic guide to this collection.

## Key Words

Biodiversity, CeNak, Herbert Weidner, ZMH, digitization, Georg Warnecke, Hanan Bytinski-Salz

## Introduction

Natural history collections are the main archives of biodiversity. They focus on collecting, maintaining and documenting natural specimens, a crucial task, especially in times of global biodiversity decline (Dirzo et al. 2014). The Zoological Museum of Hamburg (ZMH) holds large collections across all animal groups. With approximately five million specimens and several thousand primary types, the entomological collection is among the most important natural history archives in Germany. Yet, the collections are overall not well documented and updated type catalogues are largely lacking.

The last ZMH Lepidoptera catalogue was published by Herbert Weidner, a former curator of the collection,

in 1974 (Weidner 1974). Since the publication of this work more than 40 years ago, no further types have been documented. We initiated a comprehensive effort to document all of the type material preserved in the ZMH in English language (Sartori et al. 2016; Dey and Husemann 2018a, b; Harms and Duperré 2018; Monod et al. 2019; Henningsen et al. 2020; Simoes et al. 2021; Zahiri et al. 2021). We performed a detailed inventory throughout the collection. As a part of this inventory, the entire collection was thoroughly searched and types were transferred to a separate, specially protected type collection. All type specimens were compared with the original descriptions, photographed, databased and relabeled, if required. The original high-quality photographs are available online through the FUNDus! Portal of the University of Ham-

burg (<https://www.fundus.uni-hamburg.de/>). The complete data of the type material is provided in two table formats: taxa format (Suppl. material 1: Table S1) and specimen format (Suppl. material 2: Table S2). Our first Lepidoptera catalogue (Zahiri et al. 2021) on the superfamilies Hepialoidea, Coccoidea and Zygaenoidea has resulted in an updated list of 259 as “type” labelled specimens belonging to 13 valid species, 34 subspecies (16 valid and 18 invalid names), and 36 names of invalid infrasubspecific rank (based on the ICZN code).

## Material and methods

### Photography

All images were taken with a custom-made digital imaging system (DUN Inc.) with stacking capabilities. The images were either taken with a Canon EOS 5DSR with a 65 mm or 100 mm lens and stacked with Zerene Stacker (PMax algorithm) or with a Canon EOS 6D with a 55 mm or 65 mm lens and stacked with Helicon Focus 5.3.

### Taxonomy

All taxonomic changes were made after studying the relevant original descriptions of the type material. Synonyms that have already been proposed are listed only if discussed and the type material was examined. Classification used herein follows van Nieuwerken et al. (2011). The higher taxonomy of the families Papilionidae, Hesperiidae, Pieridae, Lycaenidae, Riodinidae, and Nymphalidae, as well as the classification below the family level presented here, are based on a combination of recent comprehensive morphological and molecular studies (Paulus et al. 1996; Wahlberg et al. 2009; Heikkilä et al. 2011; Kawahara et al. 2014), as well as the updated checklist of the European butterflies (Wiemers et al. 2018). Finally, like almost all major Lepidoptera databases and catalogues, we did not follow the principle of gender agreement in species names (Sommerer 2002). The recommendation not to follow the articles 31.2 and 34.2 of the ICZN code was adopted at the General Meeting of the Societas Europea Lepidopterologica (SEL) in a resolution proposed at the 13<sup>th</sup> European Congress of Lepidopterology in Korsør (Denmark) on June 4, 2002 (van Nieuwerken 2019).

### Type material

Type localities are cited in their original spelling or with additional remarks (in square brackets), if required. All data was transcribed verbatim as appearing on the respective labels. For unreadable data a question mark (?) was used. Double slash (//) separates data on different labels, a single slash (/) separates lines within each label, and semi-colon (;) separates different specimens. Additional comments are placed in square brackets.

The ICZN (1999) terminologies (e.g., holotype, syntype, lectotype, neotype, paratype, paralectotype, allotype, cotype etc.) are available at the ICZN website (<http://iczn.org/content/Glossary>) and ICZN articles cited in the text can be found below:

**Infrasubspecific taxon** — a taxon at lower rank than that of subspecies. The names of such taxa are not regulated by the Code.

**Article 45.6.1.** — A name is infrasubspecific if its author expressly gave it infrasubspecific rank, or if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity;

**Article 45.6.2.** — A name is deemed to be infrasubspecific if its author used one of the terms “aberration”, “ab.” or “morph”.

**Article 45.6.3.** — A name is deemed to be infrasubspecific if it was first published after 1960 and the author expressly used one of the terms “variety” or “form” (including use of the terms “var.”, “forma”, “v.” and “f.”);

**Article 45.6.4.** — A name is subspecific if first published before 1961 and its author expressly used one of the terms “variety” or “form” (including use of the terms “var.”, “forma”, “v.” and “f.”), unless its author also expressly gave it infrasubspecific rank, or the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, in which case it is infrasubspecific.

## Type specimens deposited at the Zoological Museum Hamburg (ZMH)

### Superfamily Papilioidea Latreille, 1802

Papilioidea (butterflies), currently containing seven families with approximately 18,800 described species worldwide (van Nieuwerken et al. 2011), is one of the well-studied lepidopteran groups. The family Nymphalidae (Brush-footed butterflies) with 6,152 described species is the most diverse taxonomic group followed by Lycaenidae (Blues and coppers) with 5,201 species, Hesperiidae (Skippers) with 4,113 species, Riodinidae (Metalmark butterflies) with 1,532 species, Pieridae (Whites or Yellow-whites) with 1,164 species, Papilionidae (Swallowtails) with 570 species and Hedylidae with only 36 species (van Nieuwerken et al. 2011).

#### Family Papilionidae Latreille, 1802

##### Subfamily Parnassiinae Duponchel, 1835

###### 1. *tridentina* Dannehl, 1925

**Original combination.** “*Parnassius apollo* L. (*tridentina* Dannehl)” Dannehl, 1925 Ent. Z. 39: 6.

**Current combination.** *Parnassius apollo tridentina* Dannehl, 1925.

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 61579–61580) (Fig. 1). “Teriol. Mer. / Sum. alp. / Palon / 1.7.24 Ibor [?] / Dannehl” // “Cotype” // “1.7. 1924 / Mt. Palon / Südtirol / Dannehl” // “f. *tridentina* Dhl.” // “Mus. Altona comm / Eing Nr 3-65” // “ZMH 61579”; “10.6” // “Dannehl / Teriol. mer. / Alp. vai. / Mt. Palon / 1400 m.” // “Cotype” // “10.6 / Mt. Palon / Südtirol / Dannehl” // “Mus. Altona comm / Eing Nr 3-65” // “ZMH 61580”.

**Type locality.** Italy: “Lokalrasse aus den östlichen Teilen der Trentiner (Sarcataler) Alpen; westl. Etschufer südlich Trient. 1200–1600 m.”

## 2. *mendolensis* Dannehl, 1925

**Original combination.** “*Parnassius apollo* L. (*mendolensis* Dannehl).” Dannehl, 1925 Ent. Z. 39: 6.

**Current combination.** *Parnassius apollo mendolensis* Dannehl, 1925.

**Current status.** Valid subspecies.

**Type material.** Syntypes 1♂1♀ (ZMH 61581–61582) (Fig. 2). “*mendolensis* ♀” // “Teriol mer. / Mendel / 24. juni / coll. F. Dannehl” // “Cotype” // “Mus. Altona comm / Eing Nr 3-65” // “ZMH 61581”; “*mendolensis* ♂” // “Teriol mer. / Mendel / 3.Juni.22 / coll. F. Dannehl” // “Cotype” // “Cotype” // “Mus. Altona comm / Eing Nr 3-65” // “ZMH 61582”.

**Type locality.** Italy: “Fliegt auf den oberen der Mendelstraße bei Bozen und in den meisten östlichen Taleinschnitten des Mt. Roen, 500–1800 m.”

## 3. *sevensis* Kesenheimer, 1921

**Original combination.** “*Parn. apollo* Linné, nov. subsp. *sevensis* Ksh.” Kesenheimer, 1921 Ent. Z. 34: 63.

**Current combination.** *Parnassius apollo sevensis* Kesenheimer, 1921.

**Current status.** Junior subjective synonym of *Parnassius apollo meridionalis* Pagenstecher, 1909.

**Type material.** Syntypes 1♂1♀ (ZMH 61583–615584) (Fig. 3). “Cotype” // “*apollo* / *sevensis* / Cotype ♀ / 19.7.14 / Aalfeld – Sternsee / H.W. Kesenheimer” // “Cotype” // “Sammlung / G. Warnecke / Eing Nr. 5, 1949” // “ZMH 61583”; “Sammlung / G. Warnecke / Eing Nr 51949” // “*apollo sevensis* / Cotype ♂ / 19.3.14 / Aalfeld - Sternsee / H.W. Kesenheimer” // “Cotype” // “Cotype” // “ZMH 61584”.

**Type locality.** France: “von Sewen im Masmünsterthal in den Vogesen”.

## 4. *kricheldorfii* Eisner, 1928

**Original combination.** “*Parnassius apollo*, forma *kricheldorfii* (m.)” Eisner, 1928 Int. Ent. Z. 22: 309.

**Current combination.** *Parnassius apollo kricheldorfii* Eisner, 1928.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 61585) (Fig. 4). “Asturien / Picos de Europa / 1800–2000 m. / 20. –28. VII.1928 / leg. A. Kricheldorf” // “v. *Kricheldorfii* Eisn.” // “Co-Type / e Collection / Bang Haas” // “Cotype” // “*Parnassius v. Kricheldorfii* Eis. / det. Eisner” // “Sammlung / G Warnecke / Eing Nr.5. 1949” // “ZMH 61585”.

**Type locality.** Spain: “Asturien, Picos de Europa, 1800–2000 m”.

**Remarks.** Eisner (1928) proposed this name as a form of *P. apollo* (Linnaeus, 1758). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and the author expressly used the terms “variety” or “form”.

## 5. ab. *praetexta* Gelpke, 1929

**Original combination.** “*Parnassius apollo* L. f. *valesiacus* ab. *praetexta* m.” Gelpke, 1929 Int. Ent. Z. 23: 123.

**Current combination.** *Parnassius apollo valesiacus* ab. *praetexta* Gelpke, 1929.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♀ (ZMH 61586) (Fig. 5). “Type / *P. apollo* L: *valesiacus* / Fruhst. / ab. *praetexta* Gelpke / I. E. Z. Guben 23 Jahrg 1929 / S. 122 [illegible]” // “13.7. 1927 / Lötschental / ob Wiler / Wallis 1550 m” // “Type” // “ab. *praetexta* Gelpke” // “Mus. Altona comm / Eing. Nr. 3-65 // ZMH 61586”.

**Original locality.** Switzerland: Swiss Alps. “oberhalb Wiler”.

**Remarks.** Gelpke (1929) proposed this name as an aberration of *P. a. valesiacus* Fruhstorfer, 1906. Therefore, as stated by articles 45.6.1 and 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (if the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable.

## 6. ab. *uniformis* Stauder, 1922

**Original combination.** “*Parnassius apollo* ab. *uniformis*” Stauder, 1922 Soc. Ent. 36: 10 (Note)

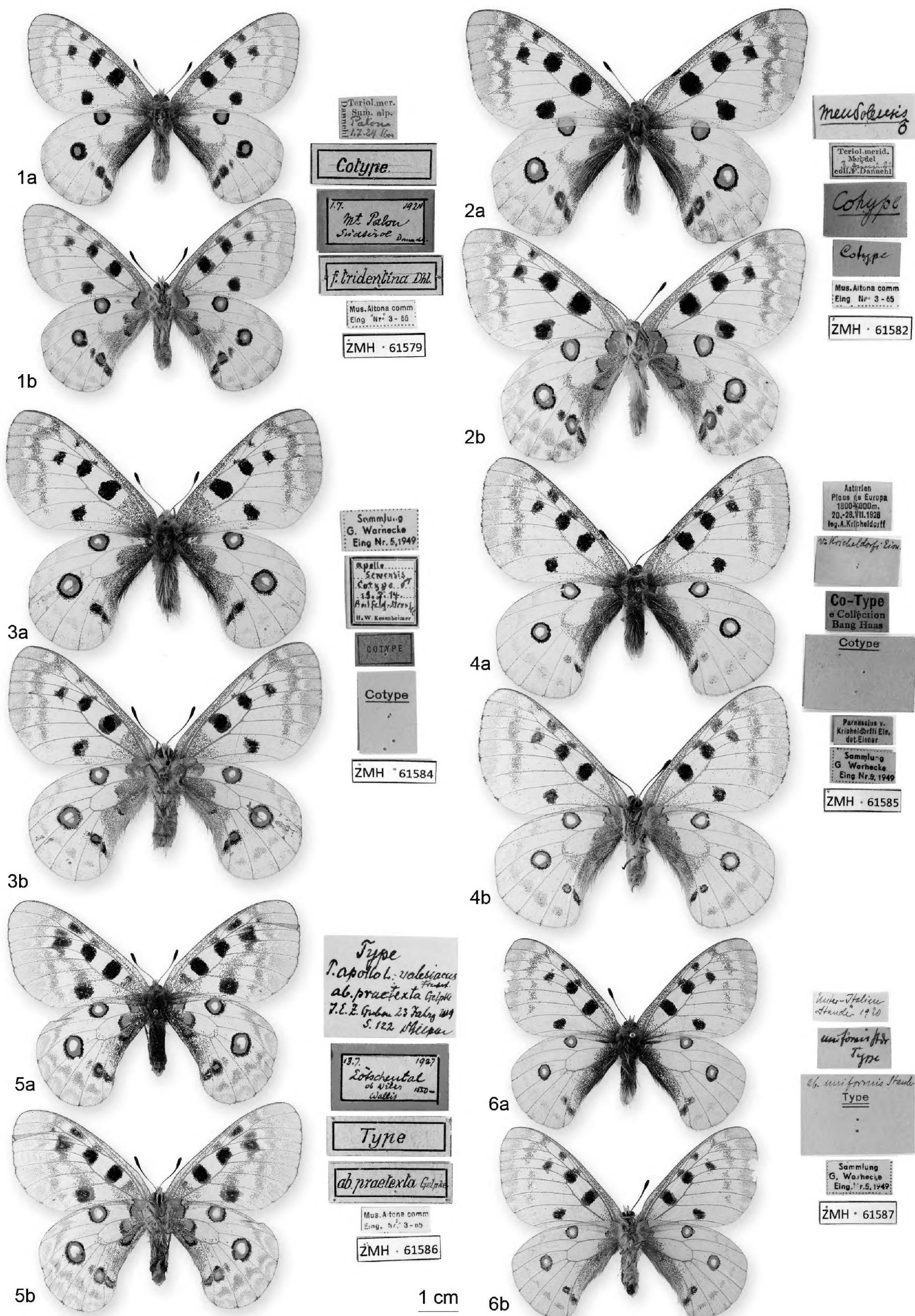
**Current combination.** *Parnassius apollo* ab. *uniformis* Stauder, 1922.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 61587) (Fig. 6). “Unter-Italien / Stauder 1920” // “*uniformis* Stdr / Type” // “ab. *uniformis* Stauder / Type” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61587”.

**Original locality.** Italy: “Unteritalien”.

**Remarks.** Stauder (1922) proposed this name as an aberration of *P. apollo* (Linnaeus, 1758). Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used one of the terms “aberration”, “ab.” or “morph”) and is hence unavailable.



**Plate 1.** 1. *Parnassius apollo tridentina* Dannehl, 1925; 2. *Parnassius apollo mendolensis* Dannehl, 1925; 3. *Parnassius apollo sevensis* Kesenheimer, 1921; 4. *Parnassius apollo kricheldorfii* Eisner, 1928; 5. *Parnassius apollo valesiacus* ab. *praetexta* Gelpke, 1929; 6. *Parnassius apollo* ab. *uniformis* Stauder, 1922. **a.** Dorsal view, **b.** ventral view.

## 7. f. *bispupillata* Turati, 1918

**Original combination.** “*Parnassius apollo pumilus* Stich. forma *bispupillata*” Turati, 1918 Atti. Soc. Ital. Sci. Nat. 57: 40.

**Current combination.** *Parnassius apollo pumilus* f. *bispupillata* Turati, 1918.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 1♂ (ZMH 61588) (Fig. 7). “Calabrien / [illegible], 1800 m / Stauder, 5.7.20” // “*bispupillata*” // “*bispupillata*” // “Cotype” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61588”.

**Original locality.** Italy: Calabria.

**Remarks.** Turati (1918) proposed this name as a form of *P. a. pumilus* Stichel, 1906. Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (if the author expressly gave it infrasubspecific rank) and is hence unavailable.

## 8. f. *appendiculata* Turati, 1918

**Original combination.** “*Parnassius apollo pumilus* Stich. forma *appendiculata* (f. *nuova*)” Turati, 1918 Atti. Soc. Ital. Sci. Nat. 57: 41.

**Current combination.** *Parnassius apollo pumilus* f. *appendiculata* Turati, 1918.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 1♂ 1♀ (ZMH 61589–61590) (Fig. 8). “Calabrien / Aspermonte, 1800 m / Stauder 5.7.1920” // “*flavomaculata* / *appendiculata*” // “*flavomaculata* / *appendiculata*” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “Cotype” // “ZMH 61589”; “Calabrien / Aspermonte, 1800 m / Stauder 5.7.1920” // “*nigricans* / *appendiculata*” // “♀ *nigricans* / *appendiculata*” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “Cotype” // “ZMH 61590”.

**Original locality.** Italy: Calabria.

**Remarks.** Turati (1918) proposed this name as a form of *P. a. pumilus* Stichel, 1906. Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable.

## 9. ab. *lacrimans* Marschner, 1911

**Original combination.** “*Parnassius apollo* L. ab. *lacrimans*” Marschner, 1911 Dt. Ent. Z. Iris 25: 131.

**Current combination.** *Parnassius apollo* ab. *lacrimans* Marschner, 1911.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 61591) (Fig. 9). “Schweizer Jura / Bözinger Berg / Juli

1919 / e coll Marschner / coll. Dr. Gelpke / 1942” // “Type / *Parn. apollo* L. / f. *lacrimans* / Marschner / Collect. H. Marschner” // “ab. *lacrimans* Marschn.” // “Typen” // “Mus Altona comm. / Eing Nr. 3 05” // “ZMH 61591”.

**Original locality.** Switzerland: “schweizer Jura”.

**Remarks.** Marschner (1911) proposed this name as an aberration of *P. apollo* (Linnaeus, 1758). Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used one of the terms “aberration”, “ab.” or “morph”) and is hence unavailable.

## 10. *oenipontanus* Stauder & Felkel, 1921

**Original combination.** “*Parnassius apollo oenipontanus*, n. subsp.” Stauder & Felkel, 1921 Ent. Anz. 1: 123–124.

**Current combination.** *Parnassius apollo oenipontanus* Stauder & Felkel, 1921.

**Current status.** Valid subspecies.

**Type material.** Syntypes 10♂♂ (ZMH 61592–61601) (Fig. 10). “e.l. / 9./6.1924 / [illegible] / Innsbruck” // “Coll. Janiter / Leihgabe der / Jungiusgesellschaft / Eing Nr. 13, 1958” // “ZMH 61592”; “Type” // “Innsbruck / 10.6.1913 / J. Felkel” // “*oenipontanus* Stder / Cotype” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61593”; “Type” // “Innsbruck Stilltal” // “Silltal / 7.6.1921 / J. Felkel” // “*oenipontanus* Stder / Cotype” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61594”; “Cotype” // “*oenipontanus* / Stauder – Felkel / Innsbruk” // “Silltal / 23.5.1921 / J. Felkel” // “Coll. G. Warnecke / Eing. Nr. 11, 1983” // “ZMH 61595”; “Type” // “Silltal / 19.5.1921 / J. Felkel” / “*oenipontanus* / Stauder – Felkel” // “Innsbruck / Silltal” // “*oenipontanus* Stder / Cotype” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61596”; “Cotype” // “Innsbruck / gebirge / 21/6/1914 / J. Felkel leg.” // “*oenipontanus* Stder / Cotype” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61597”; “Type” // Innsbruck / Silltal” // “Silltal / 19.5.1921 / J. Felkel” // “*oenipontanus* Stauder / Cotype” // “Summlng / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61598”; “Type” // “H. Stauder / Nordtirol / Patsch / 11/6/1920” // “*oenipontanus* Stauder / Cotype” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61599”; “Type” // Innsbruck / 2/6/1914 / J. Felkel leg.” // “subsp. *oenipontanus* / Stauder / Cotype” // “Summlng / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61600”; “Type” // “Innsbruck / 23.6.1913 / J. Felkel” // “*oenipontanus* Stder / Cotype” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61601”.

**Type locality.** Austria: “Silltal von Wilten bei Innsbruck bis Patsch, Tirol” [Sill Valley of Wilten near Innsbruck to Patsch, Tirol].

## 11. *serpentinicus* Mayer, 1925

**Original combination.** “*Parn. apollo* v. *serpentinicus*, (Rbl. i. 1.) Mayer, subspecies nova” Z. des Öster. Ent.-Ver. 10: 2–4.

**Current combination.** *Parnassius apollo serpentinus* Mayer, 1925.

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 824705–824706) (Fig. 11). “Cotype” // “Burgland / Rötschlg. / Juli 24 / Mayer” // “Sammlung / G. Warnecke / Eing. Nr 5, 1949” // “ZMH 824705”; “Cotype” // “Burgland / Stuben / Juli 24 / L. Mayer” // “Serpentinicus Mayer” // “Sammlung / G. Warnecke / Eing. Nr 5, 1949” // “ZMH 824706”.

**Type locality.** Austria: “Auf einem Serpentinegebirge an der ungarischen Grenze” [on a Serpentine mountain at the Hungarian Border].

**12. ab. marschneri Bryk, 1911**

**Original combination.** “*Parnassius apollo* ab. *marschneri*” Bryk, 1911 Int. Ent. Z. 5: 161.

**Current combination.** *Parnassius apollo* ab. *marschneri* Bryk, 1911.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 824719) (Fig. 12). “Nordeuropa / Stockholm / Umb. / coll. Dr. Gelpke” // “Slg. Mus. Altona / Eing. Nr. 6/1978” // “Type” // “Abgebildet / Bryk” // “Internat. / Entomolog. / Zeitschrift / Guben / V. Jahrg. No. 20” // “ZMH 824719”.

**Original locality.** Not indicated. Probably Stockholm [Sweden].

**Remarks.** Bryk (1911) proposed this name as an aberration of *P. apollo* Linnaeus, 1758, therefore, as stated by article 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

**13. wenzeli Bryk, 1921**

**Original combination.** “*Parnassius apollo* v. *Wenzeli*” Bryk, 1921 Ent. Tidskr. 42: 117.

**Current combination.** *Parnassius apollo* *wenzeli* Bryk, 1921.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 824721) (Fig. 13). “Cotype” // “Silltal / 19.5.1921 / J. Felkel” // “Coll. G. Warnecke / Eing. Nr. 11 1963” // “ZMH 824721”.

**Type locality.** “Innsbruck (Patsch)”.

**Remarks.** Bryk (1921) proposed this name as a variety of *P. apollo* Linnaeus, 1758. According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”.

**14. gabrieli Bryk, 1934**

**Original combination.** “*P. nomion* ssp. *gabrieli* (subsp. nova)” Bryk, 1934 Parnassiana 3: 28.

**Current combination.** *Parnassius nomion gabrieli* Bryk, 1934.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 61602) (Fig. 14). “Co-Type / Collection / Kotzsch” // “Kukunor / Geb. Burchan Buddha / Nomohun Pass / 4000 m Juli” // “*Parnassius* / *nomion* / *gabrieli* ♂ / Bryk” // “Coll. G. Warnecke / Eing. Nr. 11 1963” // ZMH 61602”.

**Type locality.** China: “Burchan-Buddha-Kette” [Burchan-Buddha-Chain].

**15. chingamensis Bryk & Eisner, 1932**

**Original combination.** “*P. nomion* F.d.W. *chingamensis* subsp. nova” Bryk & Eisner, 1932 Parnassiana 2: 26.

**Current combination.** *Parnassius nomion chingamensis* Bryk & Eisner, 1932.

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 61604–61605) (Fig. 15). “*Parnassius* / *chinganen-* / *sis* ♂ / C. B.-L / Chingan – Feb. / Ost- Mongolei / lec 7.” // “Coll. G. Warnecke / Eing. Nr. 11. 1963” // “ZMH 61604”; “Mandschur.sept.occ. / Buchalu / Chingan mont. sept. / 1100 m. Juli” // “*chinganensis*” // “Staudinger / Bang-Haas / Blasewitz” // “Public. Bryk & Eisner / Parnass. II, 2, 1932, 26 / als I” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61605”.

**Type locality.** China: “Buchatu, Gudschal-Tal, Chingan mont. sept. 100 m.” [Buchatu, Gudschal-Valley, Chingan mont. sept. 100 m].

**Remarks.** This appears to be an erroneous original spelling, which was corrected by Eisner (1935) to “*chinganensis*”. However, Ackery (1973) treats this emendation as an unjustified emendation according to ICZN article 33.2.3 (ICZN 1999) and not as a justified emendation.

**16. tsinlingensis Bryk & Eisner, 1932**

**Original combination.** “*P. nomion* F.d.W. *tsinlingensis* subsp. nova” Bryk & Eisner, 1932 Parnassiana 2: 26.

**Current combination.** *Parnassius nomion tsinlingensis* Bryk & Eisner, 1932.

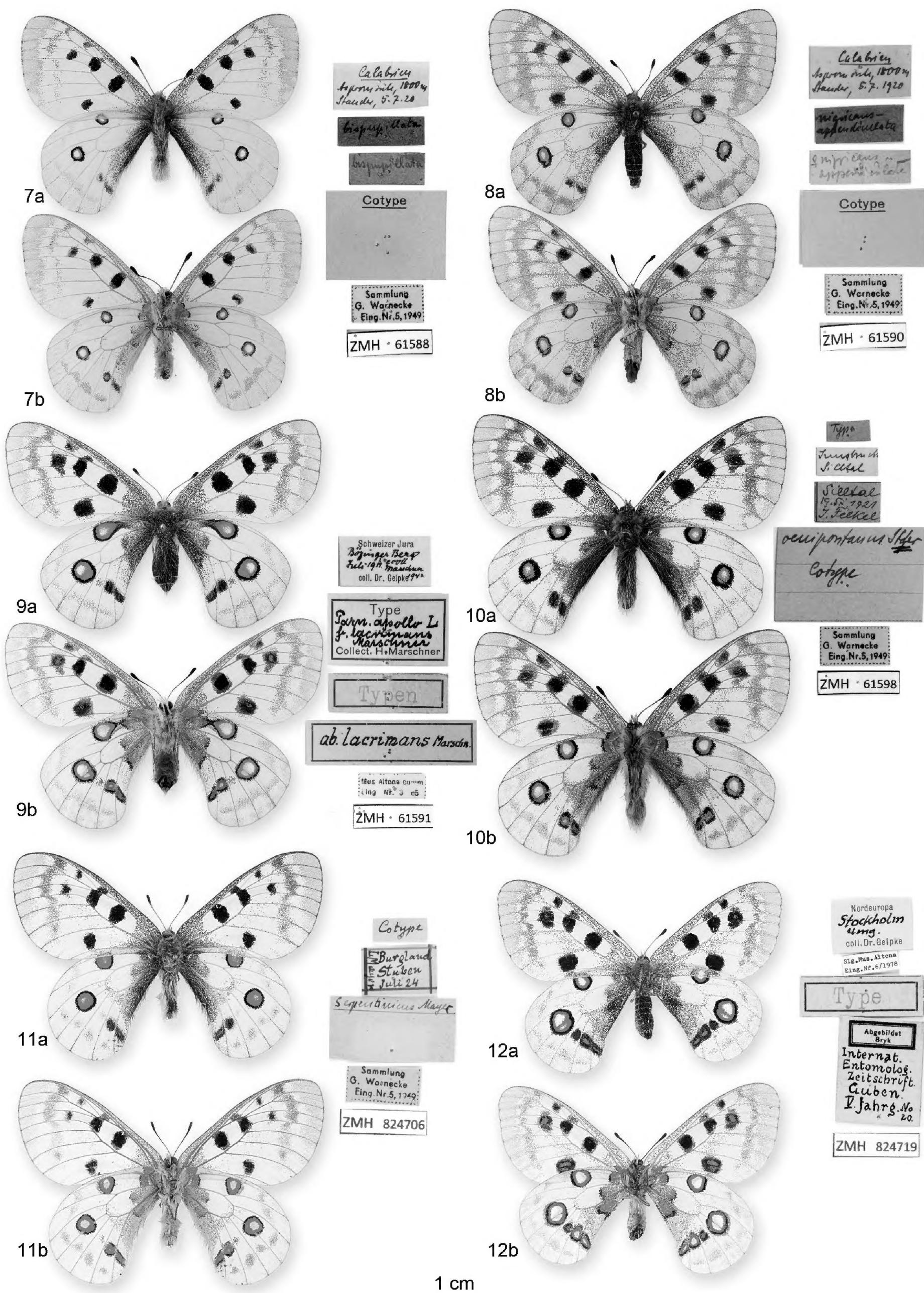
**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 61624) (Fig. 16). “Prov. Schensi / Tapaischan [?] / Tsinling schan / 3000 m 20.6.” // “Co-Type / e Collection / Bang Haas” // “subsp. *tsinlingensis*” // “Public. Bryk ü. Eisner / Parnass. II, 2, 1932 / p. 26” // Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61624”.

**Type locality.** China: “Schensi, Tapaischan, Tsinling-shan, 3000 m. VI.; Tsingshui, Liu-pinschan, 2000 m.”

**17. nominulus Staudinger, 1894**

**Original combination.** “*Parnassius Nomion* var. *Nominulus*” Staudinger, 1894 Dt. Ent. Z. Iris 7(2): 241.



**Plate 2.** 7. *Parnassius apollo pumilus* f. *bispupillata* Turati, 1918; 8. *Parnassius apollo pumilus* f. *appendiculata* Turati, 1918; 9. *Parnassius apollo* ab. *lacrimans* Marschner, 1911; 10. *Parnassius apollo oenipontanus* Stauder & Felkel, 1921; 11. *Parnassius apollo* *serpentinicus* Mayer, 1925 12. *Parnassius apollo* ab. *marschneri* Bryk, 1911. **a.** Dorsal view, **b.** ventral view.

**Current combination.** *Parnassius nomion nominulus* Staudinger, 1894.

**Current status.** Valid subspecies.

**Type material.** Type? 1♂1♀ (ZMH 824717–824718) (Fig. 17). “Irkutsk / Sibirien / A.M. Schmidt / Inh. M. Göttmann” // “*Parn. nomion* Hb. / Typus?” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 824717”; “Kentei-Geb.” // “Gebr. Dörries leg. 1893 / Erworb. e. coll. / Dörries sen. 1917” // “*Nomion* typ., [illegible]” // “Sig-G Warnecke / Eing. Nr 5 1949” // “Katalog Nr. / L. 604” // “ZMH 824718”.

**Type locality.** Russia: “Ost-Sajan-Gebiet (südwestlich von Irkutsk, an der Grenze der chinesischen Mongolei gelegen)” [East-Sajan region (southwest of Irkutsk, at the border of Chinese Mongolia)].

**Remarks.** Staudinger (1894) proposed this name as a variety of *P. nomion* Fischer & Waldheim, 1823. According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”. We believe that these two specimens belong to ssp. *nominulus* Staudinger, 1894. The year on one of the labels (1893) supports this. The question mark on the label (“Typus?”) shows uncertainty about whether it is a type. In the original description, Staudinger says: “... bemerke ich, dass die kleineren Stücke aus dem Kentei-Gebirge den grösseren var. *Nominulus* fast gleichkommen. [...] I realize that the smaller specimens from the Kentei-Mountains are very similar to the larger var. *nominulus*].

**18. *frivaldszkyi* Bang-Haas, 1928**

**Original combination.** “*Parnassius szechenyii frivaldszkyi* O. B.-Haas, subsp. nov.” Bang-Haas, 1928 Ent. Z. 42: 60.

**Current combination.** *Parnassius szechenyii frivaldszkyi* Bang-Haas, 1928.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 61603) (Fig. 18). “Kansu occ. / Liang-tschor / Richthofen mont. mar. / 2500 m Juli” // “Co-Type / Haas” // “129” // “*szechenyii / frivaldszkyi*” // “Mus Altona / Eing Nr 9-64” // “ZMH 61603”.

**Type locality.** “China sept. occ.: Kansu, Richthofen mont., südwestl. Uang-tschor”.

**19. ab. *privatus* Kotzs, 1936**

**Original combination.** “*Parnassius autocrator* Avinoff ab. *privatus*” Kotzs, 1936 Ent. Rdsch. 54: 44.

**Current combination.** *Parnassius autocrator* ab. *privatus* Kotzs, 1936.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 1♂ (ZMH 61606) (Fig. 19). “Hindukusch / Chodja-Mahomed / Geröllzone / 3800–4000 m 25.VII.–10.VIII. / leg. H. & E. Kotzs” // “Co-Type / e Collection / Kotzs” // “Mus Altona / Eing 9-64” // “ZMH 61606”.

**Original locality.** Afghanistan: “Hindukusch, Chodja-Mahomed, Geröllzone, 3800–4000 m.”

**Remarks.** Kotzs (1936) proposed this name as an aberration of *P. autocrator* Avinoff, 1913. Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used one of the terms “aberration”, “ab.” or “morph”) and is hence unavailable.

**20. *lictor* Bryk & Eisner, 1937**

**Original combination.** “*P. orleans* Oberth. subsp. *lictor* (subsp. *nova*)” Bryk & Eisner, 1937 Parnassiana 4: 58.

**Current combination.** *Parnassius orleans lictor* Bryk & Eisner, 1937.

**Current status.** Valid subspecies.

**Type material.** Syntypes 1♂1♀ (ZMH 61607–61608) (Fig. 20). “Kukunor/ Geb. Burchan Buddha / Nomohun Pass / 4000 m Juli” // “*Parnassius / orleans / lictor* ♂ / Br. u. Eis.” // “Co-Type / e Collection / Kotzs” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61607”; “Kukunor/ Geb. Burchan Buddha / Nomohun Pass / 4000 m Juli” // “*Parnassius / orleans / lictor* ♀ / Br. u. Eis.” // “Co-Type / e Collection / Kotzs” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61608”.

**Type locality.** China: Kukunor, “Burchan-Buddha, Nomohun Paß”.

**21. *buddha* Bryk & Eisner, 1937**

**Original combination.** “*P. mercurius* subsp. *buddha* (subsp. *nova*)” Bryk & Eisner, 1937 Parnassiana 4: 58.

**Current combination.** *Parnassius jacquemontii buddha* Bryk & Eisner, 1937.

**Current status.** Valid subspecies.

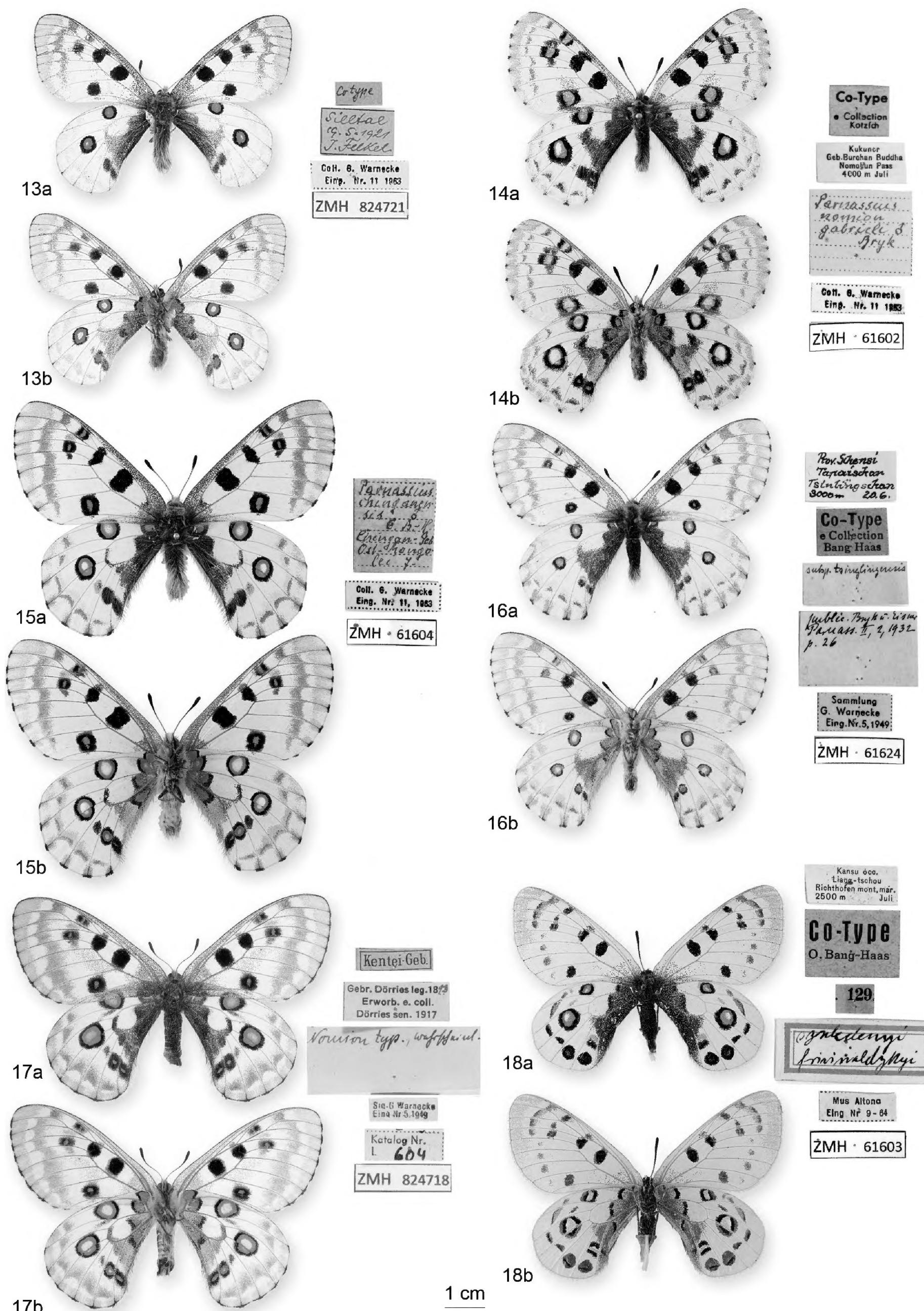
**Type material.** Syntypes 1♂1♀ (ZMH 61619–61620) (Fig. 21). “Co-Type / e Collection / Kotzs” // “Kukunor/ Geb. Burchan Buddha / Nomohun Pass / 4000 m Juli” // “*Parnassius / mercurius / buddha* ♀ / Br. U. Eis.” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61619”; “Kukunor/ Geb. Burchan Buddha / Nomohun Pass / 4000 m Juli” // “Co-Type / e Collection / Kotzs” // “*Parnassius / mercurius / buddha* ♂ / Br. U. Eis.” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61620”.

**Type locality.** China: “Burchan-Buddha-Kette, Nomohun Paß, 4000 m.”

**Remarks.** *Parnassius mercurius* Grum-Grshimailo, 1891 is currently considered a subspecies of *P. jacquemontii* Boisduval, 1836.

**22. ab. *tripicta* Sheljuzhko, 1928**

**Original combination.** “*Parnassius bremeri amgunensis*” 7. ab. *tripicta* (nov.)” Sheljuzhko, 1928 Mitt. Münch. Ent. Ges. 18: 7.



**Plate 3.** **13.** *Parnassius apollo wenzeli* Bryk, 1921; **14.** *Parnassius nomion gabrieli* Bryk, 1934; **15.** *Parnassius nomion chingamensis* Bryk & Eisner, 1932; **16.** *Parnassius nomion tsinlingensis* Bryk & Eisner, 1932; **17.** *Parnassius nomion nominulus* Staudinger, 1894; **18.** *Parnassius szechenyi frivaldszkyi* Bang-Haas, 1928. **a.** Dorsal view, **b.** ventral view.

**Current combination.** *Parnassius bremeri amgunensis* ab. *tripicta* Sheljuzhko, 1928.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 1♂ (ZMH 61621) (Fig. 22). “Mandschur sept. occ. / Buchalu / Chingan mont. Sept. / 1100 m. Juli” // “Cotype” // “Co-Type / e collection / Bang-Haas” // “*Bremeri solonensis* / ab. *tripicta* u. *flavicans*” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 61621”.

**Original locality.** Not indicated. Probably “China, Chingan mont sept., Buchalu.”

**Remarks.** Sheljuzhko (1928) proposed this name as an aberration of *P. b. amgunensis* Sheljuzhko, 1928. Therefore, as stated by articles 45.6.1 and 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable.

**23. *melaniticus* Bang-Haas, 1915**

**Original combination.** “*Parnassius actius melaniticus* O. B.-H., nov. var.” Bang-Haas, 1915 Dt. Ent. Z. Iris 29: 174, t. 5, f. 21.

**Current combination.** *Parnassius actius melaniticus* Bang-Haas, 1915.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 833442) (Fig. 23). “Co-Type” // “♂ *P. actius / melaniticus*” // “Kutschcha mont. / Thianschan or / Juli 3500 m.” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 833442”.

**Type locality.** China: “Tianschan or. mer., Kourgak Taon, Kuldscha Gebirge, nordwestlicher Karaschahr”.

**Remarks.** Bang-Haas (1915) proposed this name as a variety of *P. actius* (Eversmann, 1843). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”.

**24. *wernickei* Kotzsch, 1936**

**Original combination.** “*Parnassius charltonius* Gray subsp. *wernickei* subsp. nova.” Kotzsch, 1936 Parnassiana 4: 6.

**Current combination.** *Parnassius charltonius wernickei* Kotzsch, 1936.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 61622) (Fig. 24). “Nord-Ost-Hindukusch / Nuksan-Pass Nordseite / Alpenwiesenzone / 3500–3800 m Mitte Juli / leg. H. & E. Kotzsch” // “Co-Type / e Collection / Kotzsch” // “983” // “Slg. Mus. Altona / Eing. Nr. 6/1978” // “ZMH 61622”.

**Type locality.** Afghanistan: “Ost-Hindukusch: Nukan-Paß, Alpenwiesenzone 3500 bis 4000 m.”

**25. *inopinatus* Kotzsch, 1940**

**Original combination.** “*Parnassius inopinatus*” Kotzsch, 1940 Ent. Z. 54: 17.

**Current combination.** *Parnassius inopinatus* Kotzsch, 1940.

**Current status.** Valid species.

**Type material.** Syntypes 6♂♂ (ZMH 61609–61612, ZMH 824997–824998) (Fig. 25). “Nordwest-Afghanistan / Firuskuhi-Mont / Alpenwiesenzone / 2800–3000 m 20.IV.–15.VII. / Exp. Wernicke” // “*Parnassius / inopinatus / f* Kotzsch” // “Co-Type / Collection / Kotzsch” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61609”; “Nordwest-Afghanistan / Firuskuhi-Mont / Alpenwiesenzone / 2800–3000 m 20.IV.–15.VII. / Exp. Wernicke” // “Co-Type / Collection / Kotzsch” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61610”; “Nordwest-Afghanistan / Firuskuhi-Mont / Alpenwiesenzone / 2800–3000 m 20.IV.–15.VII. / Exp. Wernicke” // “Co-Type / Collection / Kotzsch” // “Coll. G. Warnecke / Eing. Nr. 11 1963” // “ZMH 61611”; “Nordwest-Afghanistan / Firuskuhi-Mont / Alpenwiesenzone / 2800–3000 m 20.IV.–15.VII. / Exp. Wernicke” // “*Parnassius / inopinatus / m* Kotzsch” // “Co-Type / Collection / Kotzsch” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61612”; “Nordwest-Afghanistan / Firuskuhi-Mont / Alpenwiesenzone / 2800–3000 m 20.IV.–15.VII. / Exp. Wernicke” // “Co-Type / e Collection / Kotzsch” // “980” // “Slg. Mus. Altona / Eing. Nr. 6/1978” // “ZMH 824998”.

**Type locality.** “Nordwest-Afghanistan, Firuskuhi-Kette, 2800–3000 m.”

**26. *gigas* Kotzsch, 1932**

**Original combination.** “*Parnassius imperator gigas* ssp. n.” Kotzsch, 1932 Ent. Z. 45: 267.

**Current combination.** *Parnassius imperator gigas* Kotzsch, 1932.

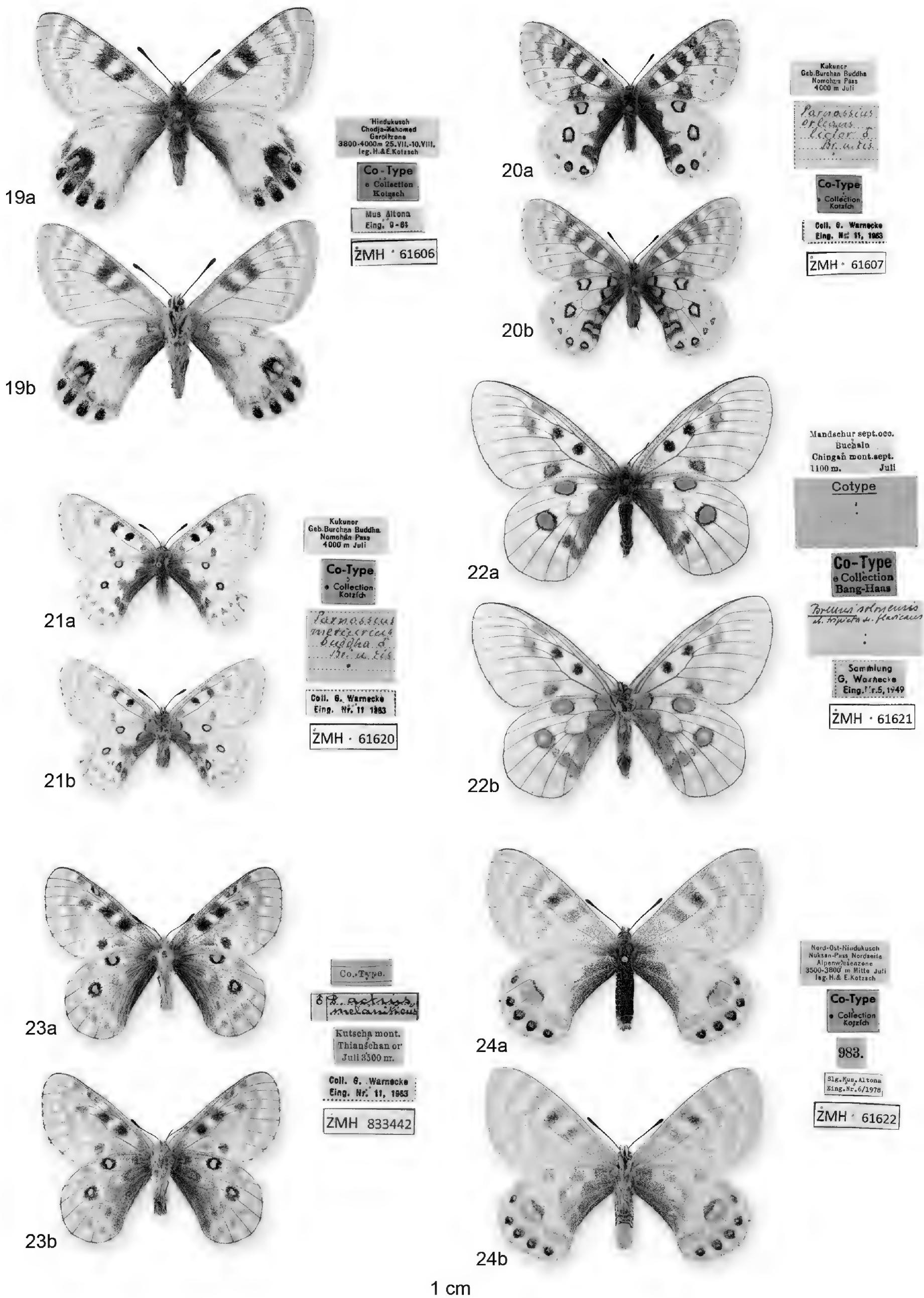
**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 61613–61614) (Fig. 26). “Sincheng / Ost-Sikingshan Gebg. / Juli 2800 m.” // “*Parnassius / imperator / gigas f / Her.*” // “Cotype” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61613”; “Sincheng / Ost-Sikingshan Gebg. / Juli 2800 m.” // “*Parnassius / imperator / gigas m / Her.*” // “Cotype” // “Coll. G. Warnecke / Eing. Nr. 11, 1963” // “ZMH 61614”.

**Type locality.** China: “vom Ostabhang des Sikingshan Gebirges – Sincheng etwa 2800 m.” [Eastern slopes of the Sikingshan Mountains – Sincheng, ca. 2800 m].

**27. *clorinda* Kolar & Querci, 1937**

**Original combination.** “*Parnassius mnemosyne* L. v. *clorinda*” Kolar & Querci, 1937 Lambillionea 5: 99.



**Plate 4.** 19. *Parnassius autocrator* ab. *privatus* Kotzsch, 1936; 20. *Parnassius orleans lictor* Bryk & Eisner, 1937; 21. *Parnassius jacquemontii buddha* Bryk & Eisner, 1937; 22. *Parnassius bremeri amgunensis* ab. *tripicta* Sheljuzhko, 1928; 23. *Parnassius actius melaniticus* Bang-Haas, 1915; 24. *Parnassius charltonius wernickei* Kotzsch, 1936. a. Dorsal view, b. ventral view.

**Current combination.** *Parnassius mnemosyne clorinda* Kolar & Querci, 1937.

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 824701–824702) (Fig. 27). “Type” // “Macedonia / Olympus, 4500’ / June 16, 1935 / Romei” // “Balkan / coll. Dr. Gelpke” // “Mus Altona / Eing. Nr. 9 – 64” // “ZMH 824701”; “Typen” // “Macedonia / Olympus, 4500’ / June 19, 1935 / Romei” // “Balkan / coll. Dr. Gelpke” // “v. clorinda Querci” // “*P. Mnemosyne* / - *Clorinda* Querci / Type abgebildet / in Lambillionea” // “Type” // “Mus Altona / Eing Nr 9-64” // “ZMH 824702”.

**Type locality.** Macedonia: Olympus.

**Remarks.** Kolar and Querci (1937) proposed this name as a variety of *P. mnemosyne* L. According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”.

## 28. *rjabovi* Sheljuzhko, 1935

**Original combination.** “*Parnassius mnemosyne rjabovi*” Sheljuzhko, 1935 Zs. Öst. Ent. Ver. 20: 22.

**Current combination.** *Parnassius mnemosyne rjabovi* Sheljuzhko, 1935.

**Current status.** Junior subjective synonym of *Parnassius mnemosyne caucasia* Verity, 1911.

**Original material.** Labelled as “Autotypes” 1♂1♀ (ZMH 824703–824704) (Fig. 28). “autotypus ♀ / *rjabovi* Shel.” // “Kleinasiens / Armenia / Daratshitshag / 7.VII.1939 / B. Tkatschukov leg. / coll. Dr. Gelpke” // “Mus Altona / Eing Nr 9-64” // “ZMH 824703”; “autotypus ♂ / *rjabovi* Shel.” // “Kleinasiens / Armenia / Daratshitshag / 7.VII.1939 / B. Tkatschukov leg. / coll. Dr. Gelpke” // “v. *rjabovi* Shel.” // “Mus Altona / Eing Nr 9-64” // “ZMH 824704”.

**Original locality.** Armenia: Daratshitshag.

**Remarks.** The year on the specimen labels (1939) indicate specimens were collected four years after description (1935) from the same location (i.e., Armenia: Daratshitshag) the original holotype material was collected. As a result, the label of the specimens treated as “autotypus” by Warnecke is erroneous. Autotypes do not exist in taxonomy. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these two specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens.

## 29. *comitis* Bryk, 1912

**Original combination.** “*Parnassius mnemosyne* var. *comitis*” Bryk, 1912 Soc. Ent. 27: 39.

**Current combination.** *Parnassius mnemosyne comitis* Bryk, 1912.

**Current status.** Junior subjective synonym of nomotypical *Parnassius mnemosyne* (Linnaeus, 1758).

**Original material.** Labelled as “Cotyphen” 1♂ (ZMH 824707) (Fig. 29). “817” // “Italia central. / Majella / 21.VII.1925 / coll. F. Dannehl” // “Italien / coll. Dr. Gelpke” // “Cotyphen” // “v. *majellensis* Dhl.” // “v. *comitis* Bryk.” // “Mus. Altona comm. / Eing. Nr. 3 65” // “ZMH 824707”.

**Original locality.** Italy: “aus der Majella Gruppe”.

**Remarks.** Bryk (1912) proposed this name as a variety of *P. mnemosyne* (Linnaeus, 1758). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”. The year on the specimen label (1925) indicates specimen was collected 13 years after description (1912) from the same location (i.e., Majella Mountains, Italy) the original holotype material was collected. As a result, the label of the specimen treated as “Cotyphen” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, this specimen is erroneously labelled as type, should be annotated as “Not a Type” and is treated here as “Non-type” specimen.

## 30. *gigantea* Staudinger, 1886

**Original combination.** “*Parnassius mnemosyne* L. var. *gigantea*” Staudinger, 1886 Stett. Ent. Ztg. 47 (4–6): 197.

**Current combination.** *Parnassius mnemosyne gigantea* Staudinger, 1886.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 824713) (Fig. 30). “v. *gigantea* / 1/86 ♂ / Tary. / Ob. Turk. / “Warnecke” // “Tary Ob. Turkestan” // “♂ *Parn. Mnemosyne* / v. *gigantea* / E.W. BETH / Hamburg. den Haag” // “Coll. H. Rödinger / Eing. Nr. 30, 1952 / Katalog Nr. L / 6133” // “ZMH 824713”.

**Type locality.** Russian Turkestan.

**Remarks.** Staudinger (1886) proposed this name as a variety of *P. mnemosyne* (Linnaeus, 1758). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”.

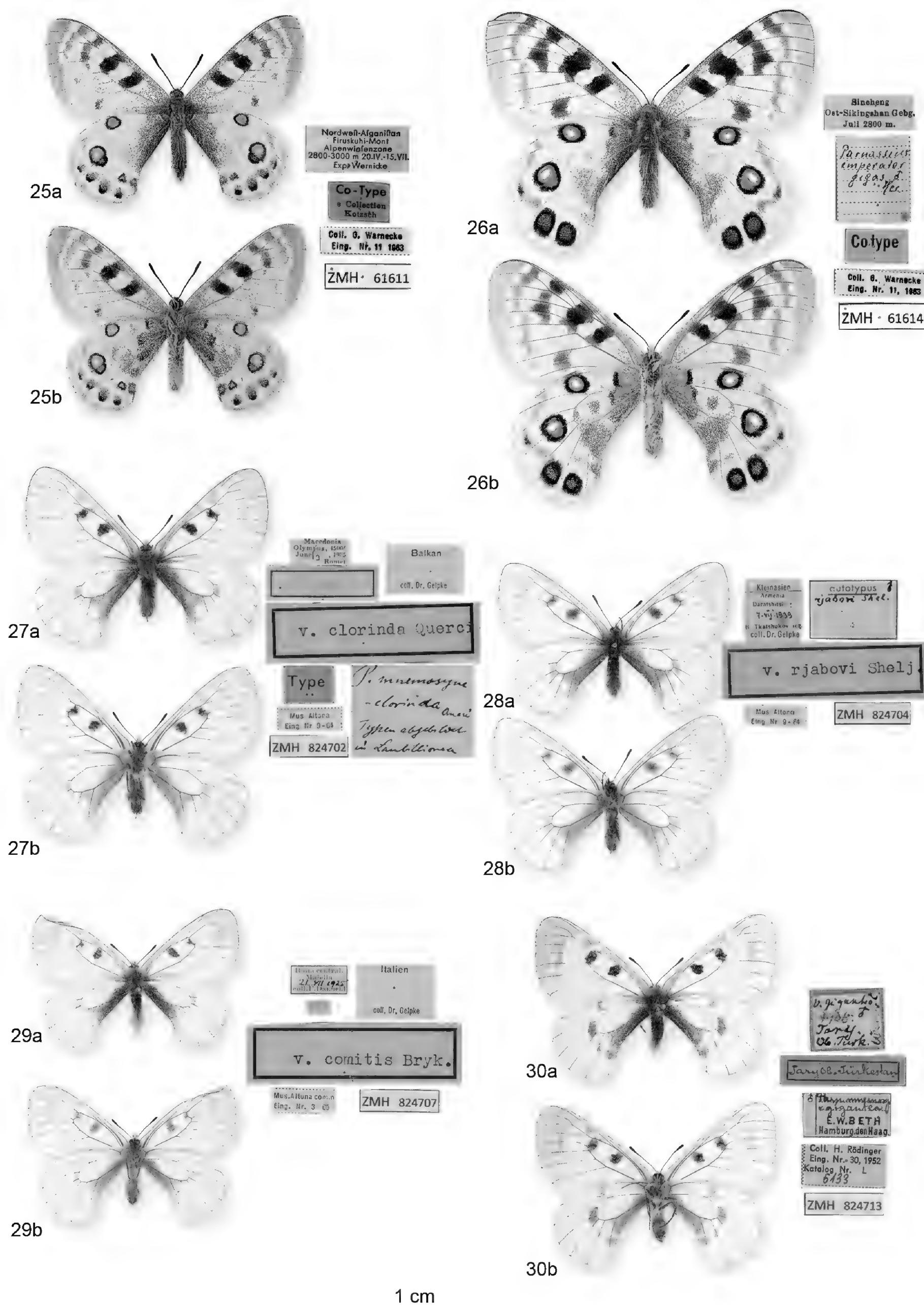
## 31. *beicki* Bryk & Eisner, 1932

**Original combination.** “*Parnassius epaphus* *beicki* subsp. nova (O. Bang-Haas i. l.)” Bryk & Eisner, 1932 Parnassiana 2: 25, 42.

**Current combination.** *Parnassius epaphus beicki* Bryk & Eisner, 1932.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 824714) (Fig. 31). “Kansu sept occ / Hsining / Nanchan mont. / Tatung /



**Plate 5.** 25. *Parnassius inopinatus* Kotzsch, 1940; 26. *Parnassius imperator gigas* Kotzsch, 1932; 27. *Parnassius mnemosyne clorinda* Kolar & Querci, 1937; 28. *Parnassius mnemosyne rjabovi* Sheljuzhko, 1935; 29. *Parnassius mnemosyne comitis* Bryk, 1912; 30. *Parnassius mnemosyne gigantea* Staudinger, 1886. **a.** Dorsal view, **b.** ventral view.

Nadelholzzone / Jüli 2000 m.” // “Co-Type / e Collection Bang-Haas” // “*Ep.* subsp. *Beiki*” // “public. v. Bryk ü. Eisner / Parnass. II, 2, 1932 p. 25” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 824714”.

**Type locality.** China: “Süd Tatung‘che Berge, Kansu, 3000 m“ [Southern Tatung Mountains, Kansu, 3000 m].

**Remarks.** Also misspelled *beiki* in literature.

### 32. ab. *rubropicta* Bang-Haas, 1915

**Original combination.** “*Parnassius epaphus* ab. *rubropicta*” Bang-Haas, 1915 Dt. Ent. Z. Iris 29: 95.

**Current combination.** *Parnassius epaphus* ab. *rubropicta* Bang-Haas, 1915.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Co-Type” 1♂ (ZMH 824715) (Fig. 32). “Karakorum mont. / Schahidulla / Chines Tarei / 4000 m. Ende Juni” // “Co-Type / e Collection / Bang-Haas” // “*subtilis* / *rubropicata*” // “Slg. Mus. Altona / Eing. Nr. 6/1978” // “ZMH 824715”.

**Original locality.** Not indicated. Probably China.

**Remarks.** Bang-Haas (1915) proposed this name as an aberration of *P. epaphus* Oberthür, 1879. Therefore, as stated by article 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

### 33. *candidatus* Bang-Haas, 1915

**Original combination.** “*Parnassius delphius* var. *candidatus*” Bang-Haas, 1915 Dt. Ent. Z. Iris 29 (2/3): 158.

**Current combination.** *Parnassius delphius* *candidatus* Bang-Haas, 1915.

**Current status.** Junior subjective synonym of the nominotypical *Parnassius delphius* Eversmann, 1843.

**Type material.** Syntype 1♂ (ZMH 824716) (Fig. 33). “Chin. Turkestan / Thianschan mont. or. / Juldus Tal / 2500 m. Juli” // “Co-Type / O. Bang-Haas” // “*delphius* – *caudi-* / *datus* Cotype” // “Slg. Mus. Altona / Eing. nr. 6/1978” // “ZMH 824716”.

**Type locality.** “Tianschan or.; Juldus (Kuldsca, Ili, Issykkul)”.

**Remarks.** Bang-Haas (1915) proposed this name as a variety of *P. delphius* Eversmann, 1843. According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”.

### 34. *eva* Kotzs, 1936

**Original combination.** “*Parnassius delphius* Eversm. subsp. *eva* subsp. *nova*” Kotzs, 1936 Parnassiana 4: 5.

**Current combination.** *Parnassius jacobsoni* *eva* Kotzs, 1936.

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 824723–824724) (Fig. 34). “Hindukusch / Chodja-Mahomed / Geröllzone / 3800.4000 m 25.VII.-10.VIII. / leg. H. & E. Kotzs” // “Co-Type / e Collection Kotzs” // “977” // “Slg. Mus. Altona / Eing. Nr. 6/1978” // “ZMH 824723”; “Hindukusch / Chodja-Mahomed / Geröllzone / 3800.4000 m 25.VII.-10.VIII. / leg. H. & E. Kotzs” // “Co-Type / e Collection Kotzs” // “978” // “Slg. Mus. Altona / Eing. Nr. 6/1978” // “ZMH 824724”.

**Type locality.** “Hindukusch, Chodja-Mahomed” [Afghanistan, Hindukusch, Khoja Mohammad Mts].

### Unpublished, unavailable names

#### 35. ab. *minor* Frank

**Original combination.** *Parnassius mnemosyne hartmanni* ab. *minor* Frank.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂ (ZMH 824708) (Fig. 35). “Nöndl. Kalkalpen / Inntaler Berge / Oberaudorf / 1.VI.24 500-700 m / coll. Dr. Gelpke” // “Mus. Altona comm. / Eing. Nr. 3-65” // “Type” // “ab. *minor* Frank” // “Mus. Altona comm. / Eing. Nr. 3 65” // “ZMH 824708”.

**Original locality.** Nöndl. Kalkalpen [Austria].

**Remarks.** This taxon cannot be found in the literature. As stated by articles 45.6.1 and 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable. The current name of the subspecies is *Parnassius mnemosyne hartmanni* Standfuss, 1888.

#### 36. ab. *nigra* Frank

**Original combination.** *Parnassius mnemosyne hartmanni* ab. *nigra* Frank.

**Current status.** “in litteris” name and hence not available.

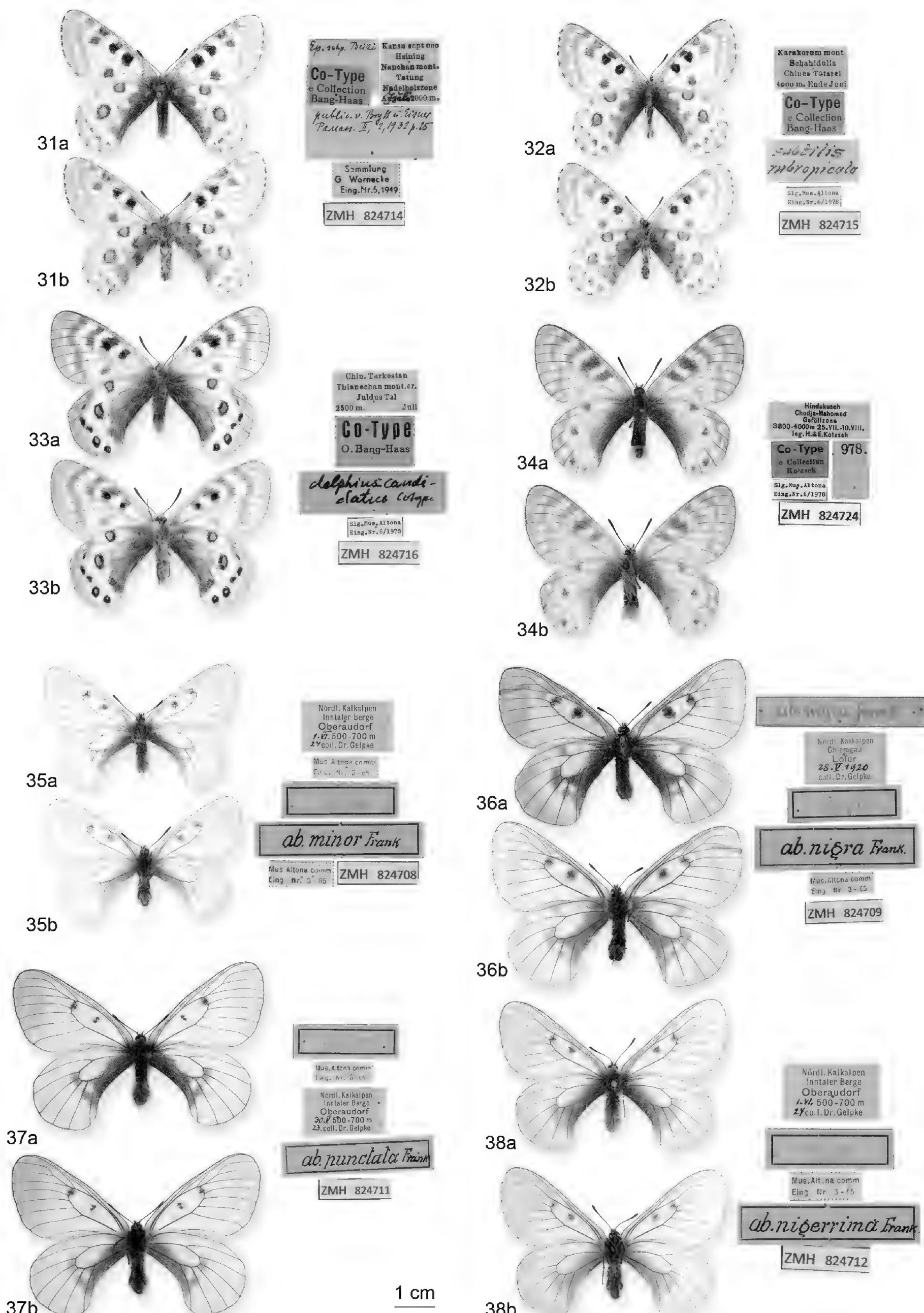
**Original material.** Labelled as “Type” 1♂ (ZMH 824709) (Fig. 36). “ab. *nigra* Frank” // “Nöndl. Kalkalpen / Chiemgau / Lofer/ 28.V.1920 / coll. Dr. Gelpke” // “Type” // “ab. *nigra* Frank” // “Mus. Altona comm. / Eing. Nr 3 - 65” // “ZMH 824709”.

**Original locality.** Nöndl. Kalkalpen [Austria].

**Remarks.** This taxon cannot be found in the literature. As stated by articles 45.6.1 and 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable. The current name of the subspecies is *Parnassius mnemosyne hartmanni* Standfuss, 1888.

#### 37. ab. *punctata* Frank

**Original combination.** *Parnassius mnemosyne hartmanni* ab. *punctata* Frank.



**Plate 6.** 31. *Parnassius epaphus beicki* Bryk & Eisner, 1932; 32. *Parnassius epaphus* ab. *rubropicta* Bang-Haas, 1915; 33. *Parnassius delphioides candidatus* Bang-Haas, 1915; 34. *Parnassius jacobsoni eva* Kotzsch, 1936; 35. *Parnassius mnemosyne hartmanni* ab. *minor* Frank; 36. *Parnassius mnemosyne hartmanni* ab. *nigra* Frank; 37. *Parnassius mnemosyne hartmanni* ab. *punctata* Frank; 38. *Parnassius mnemosyne hartmanni* ab. *nigerrima* Frank. a. Dorsal view, b. ventral view.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂, “Co-type” 1♂ (ZMH 824710–824711) (Fig. 37). “Cotypen” // “Nördl. Kalkalpen / Inntaler Berge / Oberaudorf / 1.VI.24 500–700 m / coll. Dr. Gelpke” // “Mus. Altona comm. / Eing. Nr. 3-65” // “ZMH 824710”; “Typen” // “Mus. Altona comm. / Eing. Nr. 3-65” // “Nördl. Kalkalpen / Inntaler Berge / Oberaudorf / 30.V.23 500–700 m / coll. Dr. Gelpke” // “ab. punctate Frank” // “ZMH 824711”.

**Original locality.** Nördl. Kalkalpen [Austria].

**Remarks.** This taxon cannot be found in the literature. As stated by articles 45.6.1 and 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable. The current name of the subspecies is *Parnassius mnemosyne hartmanni* Standfuss, 1888.

### 38. ab. nigerrima Frank

**Original combination.** *Parnassius mnemosyne hartmanni* ab. *nigerrima* Frank.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂ (ZMH 824712) (Fig. 38). “Nördl. Kalkalpen / Inntaler Berge / Oberaudorf / 1.VI.24 500–700 m / coll. Dr. Gelpke” // “Type” // “Mus. Altona comm. / Eing. Nr. 3-65” // “ab. *nigerrima* Frank” // “ZMH 824712”.

**Original locality.** Nördl. Kalkalpen [Austria].

**Remarks.** This taxon cannot be found in the literature. As stated by articles 45.6.1 and 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable. The current name of the subspecies is *Parnassius mnemosyne hartmanni* Standfuss, 1888.

### 39. ab. subtusalbipupillata

**Original combination.** *Parnassius apollo* ab. *subtusalbipupillata*.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂ (ZMH 824720) (Fig. 39). “Balkan / Bulgaria / Sofia / Mt. Vitosch / 2000 m Juli” // “ab. quincunx Bryk / ab. reniformis O. B.-H. / ab. laticincta Trti.” // “Mus. Altona comm. / Eing. Nr. 3-65” // “Type” // ZMH 824720”.

**Original locality.** Balkan, Bulgaria.

**Remarks.** This taxon cannot be found in the literature. As stated by article 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable. The current name of the species is *Parnassius apollo* (Linnaeus, 1758).

### 40. ab. analifasciata Gelpke

**Original combination.** *Parnassius apollo* ab. *analifasciata* Gelpke.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂ (ZMH 824722) (Fig. 40). “Süddeutschland / Fränk. Jura / Eichstätt / 12.VII.1921 / coll. Dr. Gelpke” // “Type” // “ab. *analifasciata* Gelpke” // “ab. *splendida* Osth. – *fasciata* st. / ab. *magnifica* Bryk / ab. *subt-bip.* Fr. ab. *subt-graphica* / ab. *seitzi* Brk. – *embryki* Bryk.” // “Mus. Altona comm. / Eing. Nr. 3-65” // “ZMH 824722”.

**Original locality.** South Germany.

**Remarks.** This taxon cannot be found in the literature. As stated by article 45.6.2 (ICZN 1999); it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable. The current name of the species is *Parnassius apollo* (Linnaeus, 1758).

## Subfamily Papilioninae Latreille, 1802

### Tribe Papilionini Latreille, 1802

#### 41. f. unimaculata Warnecke, 1924

**Original combination.** “*Papilio xuthus* Linnaeus f. *unimaculata*” Warnecke, 1924 Dt. Ent. Z. Iris 38: 149.

**Current combination.** *Papilio xuthus* f. *unimaculata* Warnecke, 1924.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 61623) (Fig. 41). “Japan” // “Type” // Sammlung / Fritz Diehl / Eing. Nr. 35, 1950” // “*P. xuthus* L. / n.f. // *unimaculata* / Warn.” // “ZMH 61623”.

**Original locality.** Original publication without location records; label states Japan; according to hand written type catalogue of Warnecke: Ussuri ex Coll. Dörries (67), holotype destroyed in fires in Zool. Mus. Hamburg 1943, 1 specimen with location label Japan labelled as type by Warnecke in Coll. Warnecke, now in ZMH.

**Remarks.** Warnecke (1924) proposed this name as a form of *P. xuthus* Linnaeus, 1776. According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. The text of Warnecke (1942) paper unambiguously reveals that he describes an individual form and not a (geographic) subspecies.

### Tribe Troidini Talbot, 1939

#### 42. *peruanus* Fuchs, 1954

**Original combination.** “*Papilio archidamas* var. *peruanus*” Fuchs, 1954 in Titschak, Beit. zur Fauna Perus 4: 83–84.

**Current combination.** *Battus polydamas* *peruanus* (Fuchs, 1954).

**Current status.** Valid subspecies.

**Type material.** Lectotype 1♂ (ZMH 61615) (Fig. 42). **Paralectotypes** 2♂1♀ (ZMH 61616–61617, ZMH 824999). “Rio Pampas / Cuesta de Bonbon / 8/1928 / ca. 2000 m / Type” // “HOLOTYPE / *Papilio archidamas* / var. *peruanus* / von Fuchs” // “*archidamas* / S. Rio Pampas / 2000 m” // “Z.I.M. / Hamburg” // “LECTOTYPE ♂ / *Papilio archidamas* / var. *peruanus* Fuchs / by G. Lamas, 1978” // “Coll. H. Rödinger / Eing. Nr. 30, 1952 / Katalog Nr. L.” // “*Battus archidamas* / *peruanus* von Fuchs / G. Lamas. Det. 1978” // “*Battus polydamas* / *peruanus* (Fuchs, 1954) / Lectotype ♂ / Racheli & Pischedda 1987” // “ZMH 61615”; “Rio Pampas / Cuesta de Bonbon / 8/1928 / ca. 2000 m / Type” // “*P. archidamas peruanus*” // “Z.I.M. Hamburg” // “*Battus polydamas peruanus* (Fuchs, 1954) / Paralectotype ♂ / Racheli & Pischedda, 1987” // “ZMH 61616”; “Rio Pampas / Cuesta de Bonbon / 8/1928 / ca. 2000 m / Type” // “*Battus polydamas peruanus* (Fuchs, 1954) / Paralectotype ♀ / Racheli & Pischedda, 1987” // “Z.I.M. Hamburg” // “ZMH 61617”; “♂” // “*Papilio archidamas* ♂ / var. *peruanus* / von Fuchs / Rio Pampas / Cuesta de Bonbon / c. 2000 m / 8/28” // “Z.I.M. / Hamburg” // “Type” // “*Battus polydamas peruanus* (Fuchs, 1954) / Paralectotype ♂ / Racheli & Pischedda 1987” // “Coll. H. Rödinger / Eing. Nr. 30, 1952 / Katalog Nr. L.” // “ZMH 824999”.

**Type locality.** [Lectotype] Peru: “Rio Pampas, Cuesta de Bonbon, ca. 2000 m”; lectotype designated by Lamas (1978).

**Remarks.** Fuchs (1954) proposed this name as a variety of *P. archidamas* Boisduval, 1836. According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”. *Papilio archidamas* Boisduval, 1836 is a junior subjective synonym of *Battus polydamas* (Linnaeus, 1758).

#### Tribe Leptocircini Kirby, 1896

##### 43. ab. ornatissima Warnecke, 1924

**Original combination.** “*Papilio podalirius* L. n. ab. *ornatissima* Warn.” Warnecke, 1924 Int. Ent. Z. 18: 157.

**Current combination.** *Iphiclides podalirius* ab. *ornatissima* (Warnecke, 1924).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 61618) (Fig. 43). “n. ab. *ornatissima* / Warnecke. Type” // “Type” // “ältester [?] Name: *confluens* Ver. / Rhop. Pal. P. 292, t. 57, f. 5, 19ii / vgl Lambillioneaa 1932 p. 223” // “Katalog Nr. / L. 204” // “Slg. G. Warnecke / eing. Nr. 5. 1949” // “ZMH 61618”.

**Original locality.** Southern Germany.

**Remarks.** Warnecke, (1924) proposed this name as an aberration of *Papilio podalirius* Linnaeus, 1758. Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used one of the terms “aberration”, “ab.” or “morph”) and is hence unavailable.

#### Unpublished, unavailable names

##### 44. ab. indistinctus Meinhard

**Original combination.** *Iphiclides feisthamelii* f. *ornatus* ab. *indistinctus* Meinhard.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂ (ZMH 835574) (Fig. 44). “26/5. 1906 / Stuttgart / ex larv.” // “ab. *indistinctus* / Meinh.” // “ZMH 835574”.

**Remarks.** This taxon cannot be found in the literature. Probably an aberration of *Iphiclides feisthamelii* (Duponchel, 1832). Apparently the imago emerged in Stuttgart (Germany), but the larva must have been collected in the Iberian Peninsula (M. Wiemers pers.com.).

#### Family Pieridae Swainson, 1820

##### Subfamily Coliadinae Swainson, 1827

##### 45. ab. crocopepla Warnecke, 1912

**Original combination.** “*Colias aurora* Esp. ♀ ab. *crocopepla*” Warnecke, 1912 Soc. Ent. 27: 68.

**Current combination.** *Colias heos* ab. *crocopepla* Warnecke, 1912.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♀ (ZMH 827594) (Fig. 45). “Type” // “Bikienfl.” // “ab. *crocopepla* / Warn. Soc. Ent. 27 ö. 68” // “L.6” // “sig. G. Warnecke / Eing. Nr. 5, 1949” // “Katalog Nr. / L 1754” // “AMUR-GEBIET: / Gebr. Dörries leg. 1887 / Erworb. e. coll. / Dörries sen. 1917 / (vgl. Mém. Rom. VI, / 1892 p 91)” // “ZMH 827594”.

**Original locality.** Amur [Russia].

**Remarks.** *Papilio aurora* Esper, 1783 is a junior primary homonym of *Papilio aurora* Cramer, [1780]. The former is currently known as *Colias heos* (Herbst, 1792) and the latter is known as *Colotis aurora* (Cramer, [1780]). Grieshaber and Lamas (2007) provided a nomenclatural list of all available and unavailable names in the genus *Colias* and clearly stated that *Colias aurora* [ab.] *crocopepla* is infrasubspecific and thus not available name.

##### 46. ab. rhododactyla Warnecke, 1912

**Original combination.** “*Colias aurora* Esp. ♀ ab. *rhododactyla*” Warnecke, 1912 Soc. Ent. 27: 68.

**Current combination.** *Colias heos* ab. *rhododactyla* Warnecke, 1912.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♀ (ZMH 827593) (Fig. 46). “L.39 / *Col. aurora* / ab. ♀ *rhododactyla* / Warn.” // “ab. *rhododactyla* / Warnecke / Soc. Ent. 27, 1912 p. 68” // “Katalog Nr. / L. 1755” // “Tjutjuché / Ost-Siberien” // “Sig. G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827593”.

**Original locality.** Amur [Russia].

**Remarks.** *Papilio aurora* Esper, 1783 is a junior primary homonym of *Papilio aurora* Cramer, [1780]. The former is currently known as *Colias heos* (Herbst, 1792) and the latter is known as *Colotis aurora* (Cramer, [1780]). Grieshaber and Lamas (2007) provided a nomenclatural list of all available and unavailable names in the genus *Colias* and clearly stated that *Colias aurora* [ab.] rhododactyla is infrasubspecific and thus not available name.

#### 47. ab. *theia* Warnecke, 1912

**Original combination.** “*Colias aurora* Esp. ♀ ab. *theia*” Warnecke, 1912 Soc. Ent. 27: 68.

**Current combination.** *Colias heos* ab. *theia* Warnecke, 1912.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Lectotype” 1♀ (ZMH 827609) (Fig. 47). “Kentei- / Gebirge” // “Gebr. Dörries leg. 1889 / Erworb. E. coll. / Dörries sen. 1917” // “f. *theia* Warnecke / Die Type ist im Zool. Mus. Hamburg!” // “L. 38 / Lekto-Type / *Col. aurora* f. *theia* warn.” // “Katalog Nr. / L 1750” // “Sig. G. Warnecke / Eing. Nr. 5, 1945” // “ZMH 827609”.

**Original locality.** Amur [Russia].

**Remarks.** *Papilio aurora* Esper, 1783 is a junior primary homonym of *Papilio aurora* Cramer, [1780]. The former is currently known as *Colias heos* (Herbst, 1792) and the latter is known as *Colotis aurora* (Cramer, [1780]). Grieshaber and Lamas (2007) provided a nomenclatural list of all available and unavailable names in the genus *Colias* and clearly stated that *Colias aurora* [ab.] *theia* is infrasubspecific and thus not an available name.

#### 48. f. *rebeli* Schawerda, 1906

**Original combination.** “*Colias myrmidone balcanica* f. *rebeli*” Schawerda, 1906; Verh. Zool. Bot. Ges. Wien 6: 651.

**Current combination.** *Colias caucasica balcanica* f. *rebeli* Schawerda, 1906.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 1♀ (ZMH 827619) (Fig. 48). “Orjen / Herzegowina / Dr. Schawerda” // “Sammlung / Fritz Diehl / Eing. Nr. 35, 1950” // “rebeli ♀” // “Cotype” // “Cotype” // “L5” // “Katalog Nr. L 1721” // “ZMH 827619”.

**Original locality.** Bosnia and Herzegovina: “vom Trebević”.

**Remarks.** Schawerda (1906) proposed this name as a form of *C. m. balcanica* Rebel, 1901. Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable. *Colias balcanica* Rebel, 1901 is currently regarded as subspecies

of *C. caucasica* Staudinger, 1871. Grieshaber and Lamas (2007) provided a nomenclatural list of all available and unavailable names in the genus *Colias* and clearly stated that *Colias myrmidone balcanica* [f.] *rebeli* is infrasubspecific and thus not available name.

#### 49. *tatarica* Bang-Haas, 1915

**Original combination.** “*Colias cocandica* tatarica O. B.-H. n. var.” Bang-Haas, 1915 Dt. Ent. Z. Iris 29: 98.

**Current combination.** *Colias cocandica* *tatarica* Bang-Haas, 1915.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 833446) (Fig. 49). “Co-Type” // “Chotan mer / Karakorum / Juli” // “VII. / Chotan. mer. / Karakorum / v. Friedrich [?]” // “ZMH 833446”.

**Type locality.** China: “... am Nordabhang des Karakorum, in den Gebirgen südlich der Stadt Chotan (Chinesische Tartarei)” [...around the northern slopes of the Karakorum, in the Mountains south of the town of Chotan (Chinese Tartarei)].

**Remarks.** Bang-Haas (1915) proposed this name as a variety of *C. cocandica* Erschoff, 1874. According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the terms “variety” or “form”.

#### 50. *aurea* Kotzsch, 1936

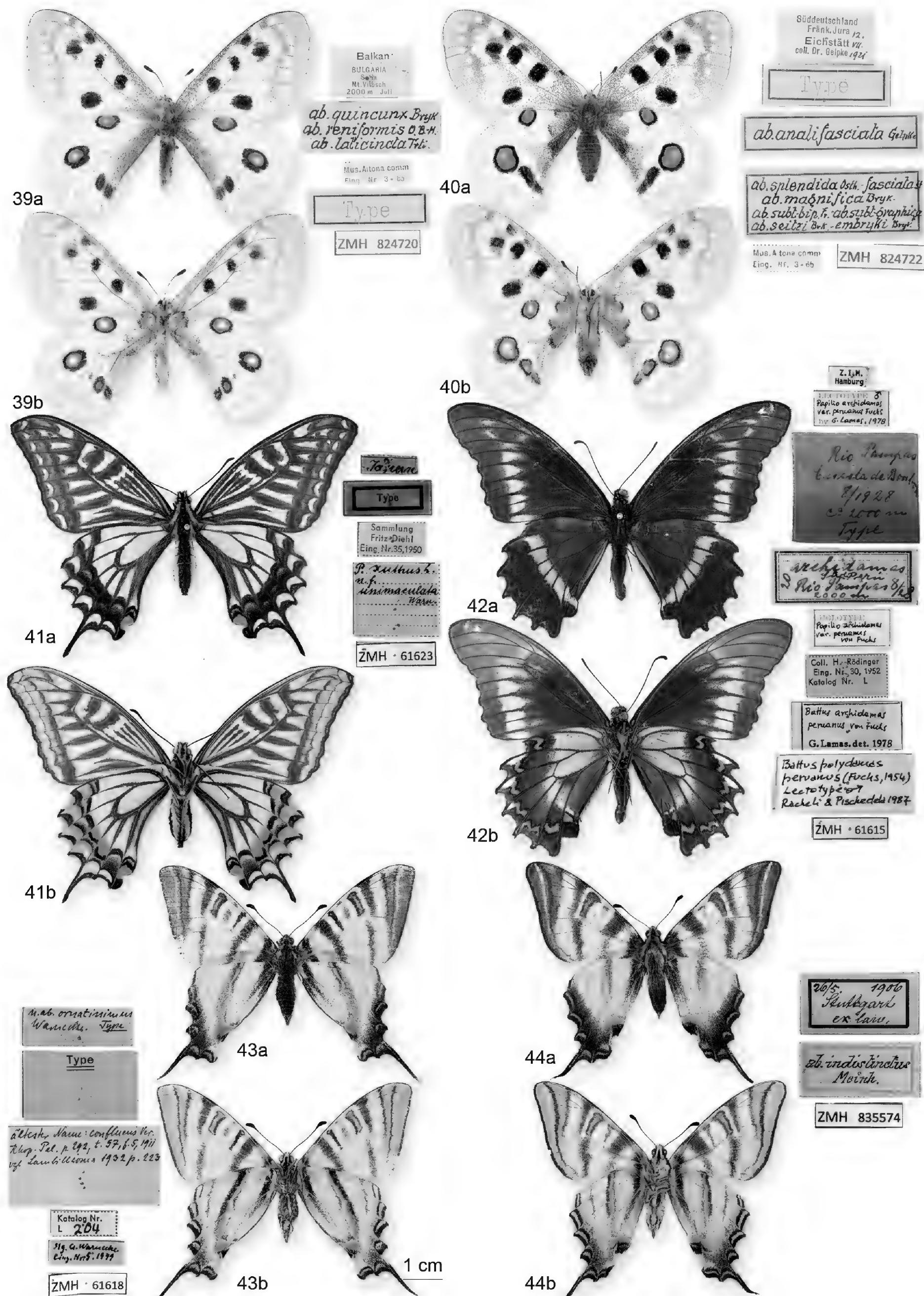
**Original combination.** “*Colias wiskotti aurea* subsp. n.” Kotzsch, 1936 Ent. Rdsch. 54(4): 45.

**Current combination.** *Colias wiskotti aurea* Kotzsch, 1936.

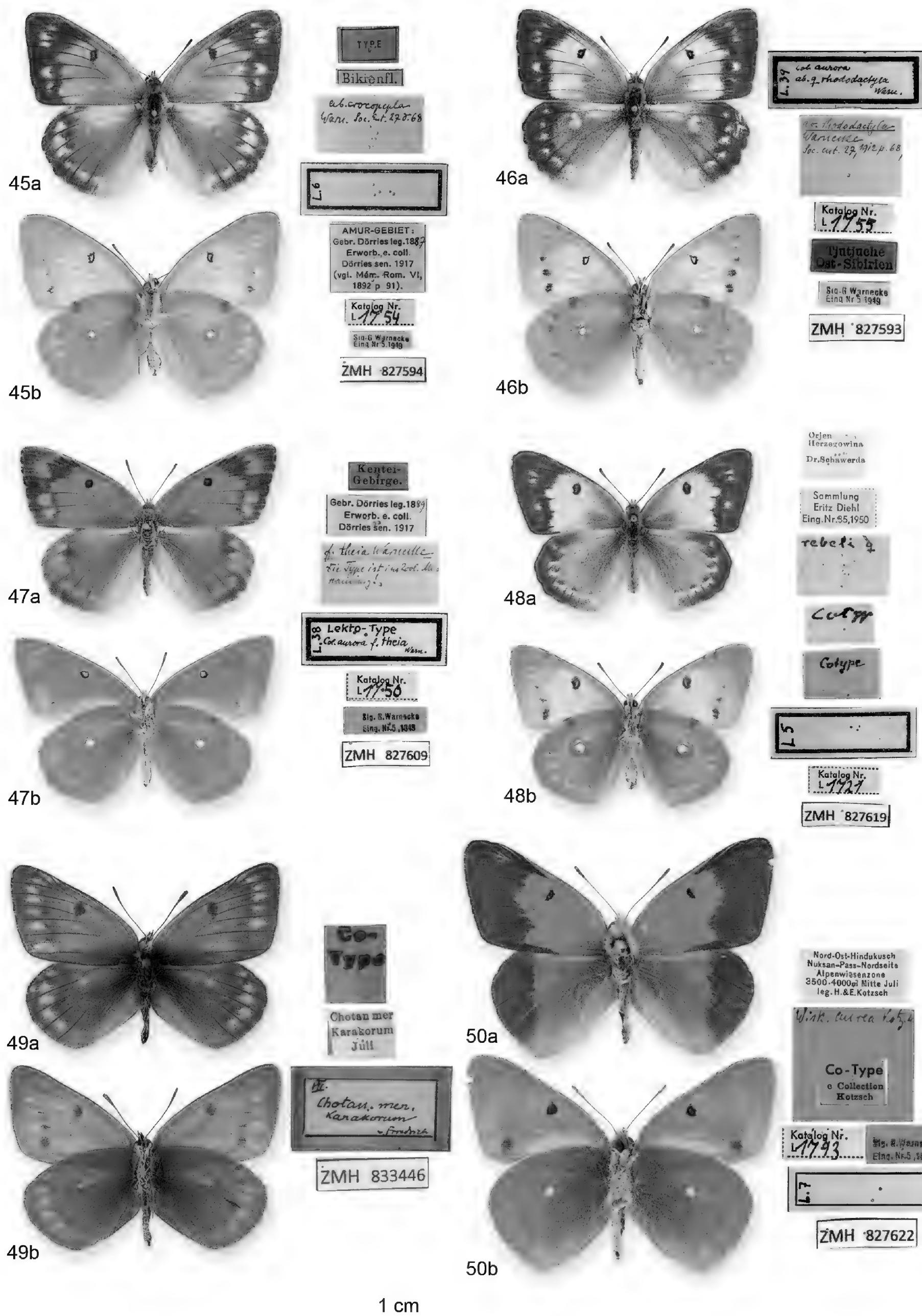
**Current status.** Valid subspecies.

**Type material.** Syntypes 3♂♂ 1♀ (ZMH 827622–827623, ZMH 835580–835581) (Fig. 50). “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H. & E. Kotzsch” // “*Wisk. aurea* Kotzsch” // “Co-Type / e Collection / Kotzsch” // “L.7” // “Katalog Nr. / L 1793” // “Sig G. Warnecke / Eing. Nr. 5, 1946” // “ZMH 827622”; “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H. & E. Kotzsch” // “Katalog Nr. / L 1794” // “*Wiskotti aurea* Ktz” // “Co-Type / e Collection / Kotzsch” // “L.8” // “Sig G. Warnecke / Eing. Nr. 5, 1946” // “ZMH 827623”; “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H. & E. Kotzsch” // “Co-Type / e Collection / Kotzsch” // “*Wiskotti* ♂ / *aurea*” // “ZMH 835580”; “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H. & E. Kotzsch” // “*Colias* ♀ / *wiskotti* / v. *aurea*” // “Co-Type / e Collection / Kotzsch” // “ZMH 835581”.

**Type locality.** Afghanistan: “Ost-Hindukusch, Nordseite, Alpenwiesenzone, 3500–3800 m.”



**Plate 7. 39.** *Parnassius apollo* ab. *subtusalbipupillata*; **40.** *Parnassius apollo* ab. *analifasciata* Gelpke; **41.** *Papilio xuthus* f. *unimaculata* Warnecke, 1924; **42.** *Battus polydamas peruanus* (Fuchs, 1954); **43.** *Iphiclides podalirius* ab. *ornatissima* (Warnecke, 1924); **44.** *Iphiclides feisthamelii* f. *ornatus* ab. *indistinctus* Meinhart. **a.** Dorsal view, **b.** ventral view.



**Plate 8.** 45. *Colias heos* ab. *crocopepla* Warnecke, 1912; 46. *Colias heos* ab. *rhododactyla* Warnecke, 1912; 47. *Colias heos* ab. *theia* Warnecke, 1912; 48. *Colias caucasica balcanica* f. *rebeli* Schawerda, 1906; 49. *Colias cocandica tatarica* Bang-Haas, 1915; 50. *Colias wiskotti aurea* Kotzsch, 1936. a. Dorsal view, b. ventral view.

## 51. *yauta* Fuchs, 1928

**Original combination.** “*Teriocolias yauta*” Fuchs, 1954  
Beiträge zur Fauna Perus 4:83.

**Current combination.** *Eurema zelia andina* (Fuchs, 1928).

**Current status.** Junior subjective synonym of *Eurema zelia andina* (Forbes, 1928).

**Type material.** Holotype 1♂ (ZMH 825001), Paratypes 8♂♀ (ZMH 825000, ZMH 825002–825008) (Fig. 51). “*Teriocolias / yauta* ♂ / J. Fuchs / Cordillere von / Ilaula 5.22 / 3000 m” // “Sammlung / W.v. Fuchs / Eing. Nr. 4. 1956” // “Type” // “Paratype / *Teriocolias yauta* / von Fuchs” // “*Teriocolias zelia / andina* Forbes / G. Lamas. det. 1978” // “ZMH 825000”; “Llauta / ca. 3000 m / 5/1922 / Type” // “Coll. H. Rödinger / Eing. Nr. 30, 1952” // “Holotype / *Teriocolias yauta* / von Fuchs” // “*Teriocolias zelia / andina* Forbes / G. Lamas. det. 1978” // “ZMH 825001”; “Llaüta / ca. 3000 m / 5/1922 / Type” // “Coll. H. Rödinger / Eing. Nr. 30, 1952” // “ZMH 825002”; “Laramate / ca 3400 m / 5/1922 / Type” // “Coll. H. Rödinger / Eing. Nr. 30, 1952” // “ZMH 825003”; “Oberhalb / Aina / ca 3000 m / 8/1924 / Type” // “Coll. H. Rödinger / Eing. Nr. 30, 1952” // “ZMH 825004”; “Llaüta / ca. 3000 m / 5/1922 / Type” // “Coll. H. Rödinger / Eing. Nr. 30, 1952” // “ZMH 825005”; “Type” // *Teriocolias / yauta* ♀ / v. Fuchs / Cordillere von / Ilaula 5.22 / 3000 m” // “Sammlung / W.v. Fuchs / Eing. Nr. 4. 1956” // “ZMH 825006”; “Type” // “Süd – Peru / Ocana, 2600 m / 7.4.1936.” // “Hbg. – Süd – Peru / Sammelreise 1936. / Eing. Nr. 1, 1937.” // “*Teriocolias / yauta* ♂ / v. Fuchs” // “Sammlung / W. v Fuchs / Eing. Nr. 4, 1956” // “ZMH 825007”; “Type” // *Teriocolias / yauta* ♀ / v. Fuchs / Cordillere von / Ilaula 5.22 / 3000 m” // “Sammlung / W.v. Fuchs / Eing. Nr. 4. 1956” // “ZMH 825008”.

**Type locality.** South Peru. “... Kordillere von Llauta ... auch an anderen Stellen der Kordilleren” [Cordillera of Llauta...also other areas in the cordilleras].

## Subfamily Dismorphiinae Schatz, 1887

### 52. *lorkovici* Pfeiffer, 1932

**Original combination.** “*Leptidea duponcheli* Stgr. ssp. n. *lorkovici* m.” Pfeiffer, 1932 in Ostheder and Pfeiffer 1932, Mitt. Münch. Ent. Ges. 22: 20.

**Current combination.** *Leptidea duponcheli lorkovici* Pfeiffer, 1932.

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 827614–827615) (Fig. 52). “Syr. Sept. / Taurus c. / Marasch / 6–900 m V.30 / Einh. Slr. leg.” // “Cotypus / *duponcheli* / ssp. *lorkovici* / Pfeiffer” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827614”; “Syria s. / Amanus s. / (Düldül Dagh) / Jeschildere / VI 33 / Coll. Pfeiffer / München” // “Cotypus / *duponcheli* / ssp. *lorkovici* / Pfeiffer” // “Coll. Bytinski-Salz / Eing. Nr 20 - 60” // “ZMH 827615”.

**Type locality.** Turkey: “Marasch in türkisch Nordsyrien; An den Hängen um M bis 1200 m” [Marasch in the

turkish regions of northern Syria. On the slopes around Marasch up to 1200 m].

### 53. f. *fragilis* Dannehl, 1925

**Original combination.** “*Leptidea sinapis* L. (gen. autumnalis) v. *fragilis* Dannehl” Dannehl, 1925 Ent. Z. 39: 6.

**Current combination.** *Leptidea sinapis* f. *fragilis* Dannehl, 1925.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 1♂ (ZMH 835575) (Fig. 53). “3.10.24” // “Südtirol Terlan / Franz Dannehl” // “*fragilis* Dhl.” // “Cotype” // “3.10 1924 / Terlan / Südtirol / Dannehl” // “ZMH 835575”.

**Original locality.** Italy: “in Südtirol bei Bozen, Fleimstal, Nonstal.”

**Remarks.** Dannehl (1925) proposed this name as a form of *L. sinapis* (Linnaeus, 1758). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. The text of Dannehl (1925) paper unambiguously reveals that this form was described as a seasonal form (autumn generation) and not as a subspecies.

### 54. ab. *simbruina* Dannehl, 1927

**Original combination.** “*Leptidea sinapis* L. ab. *simbruina* Dhl.” Dannehl, 1927 Mitt. Münch. Ent. Ges. 17: 1.

**Current combination.** *Leptidea sinapis* ab. *simbruina* Dannehl, 1927.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 2♂♂ (ZMH 835582–835583) (Fig. 54). “25.6” // “Italia central. / Mti. Simbruini / coll. F. Dannehl” // “*simbruina*” // “Cotypen” // “25.6. 1927 / Mte Simbruini / Central Italien” // “ZMH 835582”; “7.4. 1927 / Mte Simbruini / Central Italien” // “ZMH 835583”.

**Original locality.** Italy: “Sabiner und Italy: Simbruiner Berge vom Tal (Campagna) bis auf die Gipfel der angegebenen Gebirge.” [Sabiner and Italy: Simbruin Mountains from the valley (Campagna) up to the top of the stated mountain ranges].

**Remarks.** Dannehl (1927) proposed this name as an aberration of *L. sinapis* (Linnaeus, 1758). Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used one of the terms “aberration”, “ab.” or “morph”) and is hence unavailable.

### 55. *stabiarum* Staudinger, 1914

**Original combination.** “*Leptidea (Leucophasia) sinapis stabiarum* m., nov. subspec.” Staudinger, 1914 Zeit. Wiss. Ins. Biol. 10: 371, t. 11, figs. 5, 6.

**Current combination.** *Leptidea sinapis stabiarum* Staudinger, 1914.

**Current status.** Junior subjective synonym of nominotypical *Leptidea sinapis* (Linnaeus, 1758).

**Type material.** Syntypes 3♂♂ (ZMH 827624–827626) (Fig. 55). “Ital. mer. 600 m. / penins. Surrentina / M. Faito 3.6.1920 / H. Stauder legit.” // “Type” // “Sammlung / G Warnecke / Eing Nr 5, 1949” // “ZMH 827624”; “25/6 / Ital. mer. m. / penins. Surrentina / M. Fatio 3.6.1920 / H. Stauder legit.” // “Type” // “Sammlung / G Warnecke / Eing Nr 5, 1949” // “ZMH 827625”; “26/6 / Ital. mer. 700 m. / penins. Surrentina / M. Fatio 3.6.1920 / H. Stauder legit.” // “Type” // “*Sinapis stabiarum* / Stauder / v. *stabiarum*.” // “ZMH 827626”.

**Type locality.** Italy: Monte Faito and S. Angelo [Naples], 700–1400 m.

**Subfamily Pierinae Swainson, 1820**

**56. *italorum* Dannehl, 1929**

**Original combination.** “*Anthocharis euphenoides* St. *italorum* Dhl.” Dannehl, 1929 Mitt. Münch. Ent. Ges. 19: 98.

**Current combination.** *Anthocharis euphenoides italorum* Dannehl, 1929.

**Current status.** Junior subjective synonym of nominotypical *Anthocharis euphenoides* Staudinger, 1869.

**Type material.** Syntype 1♂ (ZMH 835584) (Fig. 56). “20.5” // “Apenn. Central. / Mte. Genzana / 1500–2000 m. / coll. F. Dannehl” // “Cotype” // “20.5.1928 / Mte Genzana / Central- Apenninen / 1500–2000 m D.” // “ZMH 835584”.

**Type locality.** Italy: “... in den Gebieten des Velino, Sirente, Monte Genzana, Monte Paradiso und der Majella. auf Höhen von 1500–2000 m.” [in the mountain ranges of the Velino, Sirente, Monte Genzana, Monte Paradiso and Majella. In altitudes of 1500–2000 m].

**57. *paravicinii* Stauder, 1915**

**Original combination.** “*Euchloë belia paravicinii*” Stauder, 1915 Dt. Ent. Z. Iris 29: 25.

**Current combination.** *Euchloe ausonia paravicinii* Stauder, 1915.

**Current status.** Junior subjective synonym of *Euchloe ausonia melanochloros* Röber, 1907.

**Type material.** Syntype 1♂ (ZMH 827616) (Fig. 57). “Algeria mer. / Djebel Aures / 10.5.1914 / H. Stauder” // “*Paravicinii* Stauder” // “*paravicinii* Stauder” // “Type” // “L. 4” // “Katalog Nr. / L. 1180” // “Type” // “Sig. G. Warnecke / Eing. Nr. 5, 1948” // “ZMH 827616”.

**Type locality.** Algeria: “Djebel Aurès in Südalgerien”.

**Remarks.** *Papilio belia* Stoll [1782] is a primary homonym of *Papilio belia* Linnaeus, 1767 which is currently known as *Anthocharis belia*.

**58. f. *flavide apicata* Stauder, 1922**

**Original combination.** “*Teracolus daira nouna auresiaca* g. II. *interposita* Stdr. f. *flavide apicata* m. nov.” Stauder, 1922 Mitt. Münch. Ent. Ges. 12: 24–25.

**Current combination.** *Colotis evagore nouna* f. *flavide apicata* (Stauder, 1922).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 7♂♂ (ZMH 827595–827599, ZMH 827601–827602) (Fig. 58). “Type” // “El Kautara / auf VI” // “*Auresica* gen. II. / *interposita* Stauder” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827595”; “♂” // “Type” // “Algeria mer. / Djebel Aures / VI. 1913 / H. Stauder” // “f. *interposita* / 5.VI” // “VI form / ♂ 200” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827597”; “Type” // “El Kautara / auf VI” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827596”; “Type” // “El Kautara / auf VI” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827598”; “♂” // “Type” // “Algeria mer. / Djebel Aures / VI. 1912 / H. Stauder” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827599”; “Type” // “X Djebel Aures / VII. 1912 H. Stauder” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827601”; “♂” // “Type” // “Algeria mer. / Djebel Aures / VI. 1913 / H. Stauder” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827602”.

**Original locality.** Not indicated. Probably “Algeria mer. / Djebel Aures”.

**Remarks.** Stauder (1922) proposed this name as a form of *T. d. nouna auresiaca interposita* Stauder, 1922. Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable. *Teracolus daira nouna* Lucas, 1849 is junior subjective synonym of *Colotis evagore nouna* (Lucas, 1849).

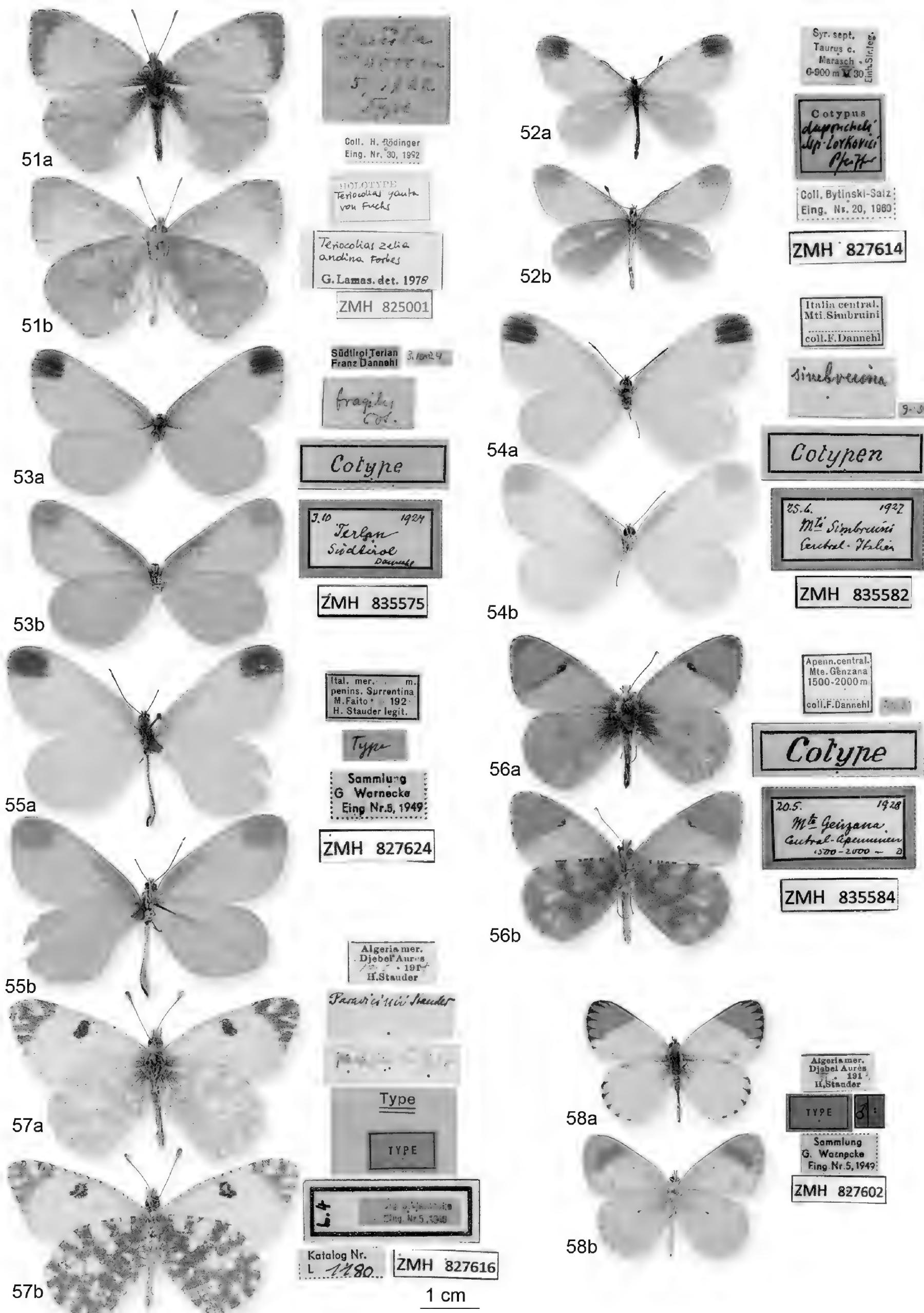
**59. f. *vernalis alticola auresiaca* Stauder, 1913**

**Original combination.** “*Teracolus daira* (= *dalia* FlDr.) *nouna* Luc. 1848 (= *demagore* FlDr.) forma *vernalis alticola auresiaca*” Stauder, 1913 Zeit. Wiss. Ins. Biol. 9: 290.

**Current combination.** *Colotis evagore nouna* f. *vernalis alticola auresiaca* (Stauder, 1913).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 3♂3♀ (ZMH 827600, ZMH 827603–827607) (Fig. 59). “♂” // “Cotype” // “Algeria mer. / Djebel Aures / V. 1912 / H. Stauder” // “auresiaca” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827600”; “♂” // “Type” // “Algeria mer. / Djebel Aurès / V. 1912 / H. Stauder” // “auresiaca / ♂ Stdr.” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827603”; “♀” // “Type” // “Algeria mer. / Djebel Aurès / V. 1912 / H. Stauder” // “auresiaca Stdr. / ♀” //



**Plate 9.** **51.** *Eurema zelia andina* (Fuchs, 1928); **52.** *Leptidea duponcheli lorkovici* Pfeiffer, 1932; **53.** *Leptidea sinapis* f. *fragilis* Dannehl, 1925; **54.** *Leptidea sinapis* ab. *simbruina* Dannehl, 1927; **55.** *Leptidea sinapis stabiarum* Staudinger, 1914; **56.** *Anthocharis euphenoides italorum* Dannehl, 1929; **57.** *Euchloe ausonia paravincinii* Stauder, 1915; **58.** *Colotis evagore nouna* f. *flavide apicata* (Stauder, 1922). **a.** Dorsal view, **b.** ventral view.

“Sammlung / G Warnecke / Eing. Nr. 5,1949” // “ZMH 827604”; “♀” // “Cotype” // “Algeria mer. / Djebel Aurès / V. 1912 / H. Stauder” // “auresiaca / ♀” // “Sammlung / G Warnecke / Eing. Nr. 5,1949” // “ZMH 827605”; “♀” // “Cotype” // “Algeria mer. / Djebel Aurès / V. 1912 / H. Stauder” // “auresiaca / ♀” // “Sammlung / G Warnecke / Eing. Nr. 5,1949” // “ZMH 827605”; “♂” // “Type” // “Algeria mer. / Djebel Aurès / V. 1912 / H. Stauder” // “auresiaca Stdr. / ♂” // “Sammlung / G Warnecke / Eing. Nr. 5,1949” // “ZMH 827607”.

**Original locality.** Algeria: “in den algerischen Atlas und die nördliche Sahara” [in the Algerian Atlas and the northern Sahara].

**Remarks.** Stauder (1913) proposed this name as a form of *T. d. nouna* (Lucas, 1848). Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable. *Teracolus daira nouna* Lucas, 1849 is junior subjective synonym of *Colotis evagore nouna* (Lucas, 1849).

## 60. f. biformata Stauder, 1913

**Original combination.** “*Teracolus daira* (= *dalia* Fldr.) *nouna* Luc. 1848 (= *demagore* Fldr.) forma autumnalis *biformata* m.” Stauder, 1913 Zeit. Wiss. Ins. Biol. 9: 290.

**Current combination.** *Colotis evagore nouna* f. *biformata* (Stauder, 1913).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827608) (Fig. 60). “♂” // “*biformata* / ♂ Stdr.” // “Type” // “Algeria mer. / Djebel Aurès / V. 1912 / H. Stauder” // “Sammlung / G Warnecke / Eing. Nr. 5,1949” // “ZMH 827608”.

**Original locality.** Algeria: “in den algerischen Atlas und die nördliche Sahara” [in the Algerian Atlas and the northern Sahara].

**Remarks.** Stauder (1913) proposed this name as a form of *T. d. nouna* (Lucas, 1848). Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable. *Teracolus daira nouna* Lucas, 1849 is junior subjective synonym of *Colotis evagore nouna* (Lucas, 1849).

## 61. f. aestiva pyroleuca Stauder, 1913

**Original combination.** “*Teracolus daira nouna* Luc. forma *aestiva pyroleuca* m.” Stauder, 1913 Zeit. Wiss. Ins. Biol. 9: 290.

**Current combination.** *Colotis evagore nouna* f. *aestiva pyroleuca* (Stauder, 1913).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type and Cotype” 10♂♀ (ZMH 827618, ZMH 827628–827636) (Fig. 61).

“♀” // “Djebel Aurès / VII. 1912 Stauder” // “*nouna* var. / *pyroleuca* / Stauder” // “TYPE” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827618”; “♀” // “Algeria mer. / Djebel Aurès / VII. 1912 / H. Stauder” // “*pyroleuca* ♀” // “COTYPE” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827628”; “♂” // “Algeria mer. / Djebel Aurès / VII. 1912 / H. Stauder” // “COTYPE” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827629”; “♂” // “Algeria mer. / Djebel Aurès / VII. 1912 / H. Stauder” // “*pyroleuca* ♂” // “TYPE” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827630”; “♀” // “Algeria mer. / Djebel Aurès / VII. 1912 / H. Stauder” // “*pyroleuca* ♀” // “COTYPE” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827631”; “♂” // “Algeria mer. / Djebel Aurès / VII. 1912 / H. Stauder” // “*pyroleuca* ♂” // “COTYPE” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827632”; “♂” // “Algeria mer. / Djebel Aurès / VII. 1912 / H. Stauder” // “*pyroleuca* ♂ NO” // “COTYPE” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827633”; “♂” // “COTYPE” // Algeria mer. / El Kaictara [?] / anfg IX 19 / H. Stauder” // “*pyroleuca* ♂” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827634”; “♀” // “Type” // “Algeria mer. / Djebel Aures / VII. 1912 / H. Stauder” // “*pyroleuca* ♀” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827635”; “♂” // “TYPE” // “Algeria mer. / Djebel Aurès / VII. 1913 / H. Stauder” // “Sammlung / G Warnecke / Eing. Nr. 5, 1949” // “ZMH 827636”.

**Original locality.** Algeria: “in den algerischen Atlas und die nördliche Sahara” [in the Algerian Atlas and the northern Sahara].

**Remarks.** Stauder (1913) proposed this name as a form of *T. d. nouna* (Lucas, 1848). Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable. *Teracolus daira nouna* Lucas, 1849 is junior subjective synonym of *Colotis evagore nouna* (Lucas, 1849).

## 62. ab. evagorides Stauder, 1913

**Original combination.** “*Teracolus daira nouna* Luc. ab. *evagorides* m.” Stauder, 1913 Zeit. Wiss. Ins. Biol. 9: 290.

**Current combination.** *Colotis evagore nouna* ab. *evagorides* (Stauder, 1913).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 2♂♂ (ZMH 827620–827621) (Fig. 62). “♂” // “Algeria mer. / Djebel Aurès / VI. 1913 / H. Stauder” // “Sammlung / G Warnecke / Eing. Nr. 5,1949” // “COTYPE” // “ZMH 827620”; “♂” // “*evagorides* / Stdr.” // “Algeria mer. / Djebel Aurès / VII. 1912 / H. Stauder” // “TYPE” // “Sammlung / G Warnecke / Eing. Nr. 5,1949” // “ZMH 827621”.

**Original locality.** Algeria: “in den algerischen Atlas und die nördliche Sahara” [in the Algerian Atlas and the northern Sahara].

**Remarks.** Stauder (1913) proposed this name as an aberation of *T. d. nouna* (Lucas, 1848). Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable. *Teracolus daira nouna* Lucas, 1849 is junior subjective synonym of *Colotis evagore nouna* (Lucas, 1849).

### 63. *italorum* Stauder, 1921

**Original combination.** “*Pieris brassicae* L. f. n. (g. aest. mer. *altilcola*) *italorum*” Stauder, 1921 Dt. Ent. Z. Iris 35: 26.

**Current combination.** *Pieris brassicae italorum* Stauder, 1921.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 827617) (Fig. 63). “Calabria mer. / Aspromonte 900 m. / 29/6 Polsi [?] 1920 / H. Stauder Legit.” // “Type” // “*brassicae* var. / *italorum* Staud.” // “ZMH 827617”.

**Type locality.** Italy: “i.[talien] c.[entralis] m.[eridionalis], Aspromonte, Montalto, 1800 m.”

### 64. *elbursina* Bytinski-Salz & Brandt, 1937

**Original combination.** “*Pieris ergane*, Hbn. ssp. *elbursina*, ssp. nov.” Bytinski-Salz & Brandt, 1937 Ent. Rec. 49: 1–2.

**Current combination.** *Pieris ergane elbursina* Bytinski-Salz & Brandt, 1937.

**Current status.** Valid subspecies.

**Type material.** Syntypes 3♂♂ 1♀ (ZMH 827610–827613) (Fig. 64). “IRAN / Keredj (1500 m.) / 18/5 1936 / Brandt” // “Cotypus / *ergane* ssp. / *pfeifferi* / By.S+Br.” // “Coll Bytinski-Salz / Eing. Nr. 20, 1960” // ZMH 827610”; “IRAN / Keredj (1200 m.) / 4.4. 1936 / Brandt” // “Cotypus / *P. ergane* / ssp. *pfeifferi* / By.S & Br.” // “ssp. *pfeifferi* Byt.” // “Coll Bytinski-Salz / Eing. Nr. 20, 1960” // ZMH 827611”; “IRAN / Keredj (1500 m.) / 20/5 1936 / Brandt” // “Cotypus / *ergane* ssp. / *pfeifferi* / By.S+Br.” // “Coll Bytinski-Salz / Eing. Nr. 20, 1960” // ZMH 827612”; “IRAN / Keredj (1500 m.) / 18/5 1936 / Brandt” // “Cotypus / *ergane* ssp. / *pfeifferi* / By.S+Br.” // “ssp. *pfeifferi* / By.S. & Br.” // “Coll Bytinski-Salz / Eing. Nr. 20, 1960” // ZMH 827613”.

**Type locality.** Iran: Tehran, “Keredj” [Karaj].

**Remarks.** Label indicates ssp. *pfeifferi*, but apparently this name does not exist. Collection data are identical to ssp. *elbursina*, possibly a last-minute name change by Bytinski-Salz.

### 65. r. *exigua* Verity, 1923

**Original combination.** “*Pieris ergane*, H.-G. race *exigua*, mihi.” Verity, 1923 Ent. Rec. 35 Suppl. (18).

**Current combination.** *Pieris ergane* r. *exigua* Verity, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Cotype” 2♂♂ (ZMH 835577–835578) (Fig. 65). “*exigua* Vrty” // “Marche / Bolognola / 7 Ag 1937 / Querci” // [blank label] // “ZMH 835577”; “*exigua* Vrty” // “Marche / Bolognola / 8 Ag 1937 / Querci” // [blank label] // “ZMH 835578”.

**Original locality.** Italy: “Upper Fargno Valley, at 1400 m., in the Sibillini Mts.”

**Remarks.** Verity (1923) proposed this name as a race of *P. ergane* (Geyer, 1828). According to Kudrna (1983), this name is unavailable because it is a seasonal form and also a nomen nudum. The year on the specimen labels (1937) indicate specimens were collected 14 years after description (1923) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these two specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens.

### 66. f. *rossioides* Stauder, 1921

**Original combination.** “*P. rapae* L. f. n. *rossioides*” Stauder, 1921 Dt. Ent. Z. Iris 35: 27.

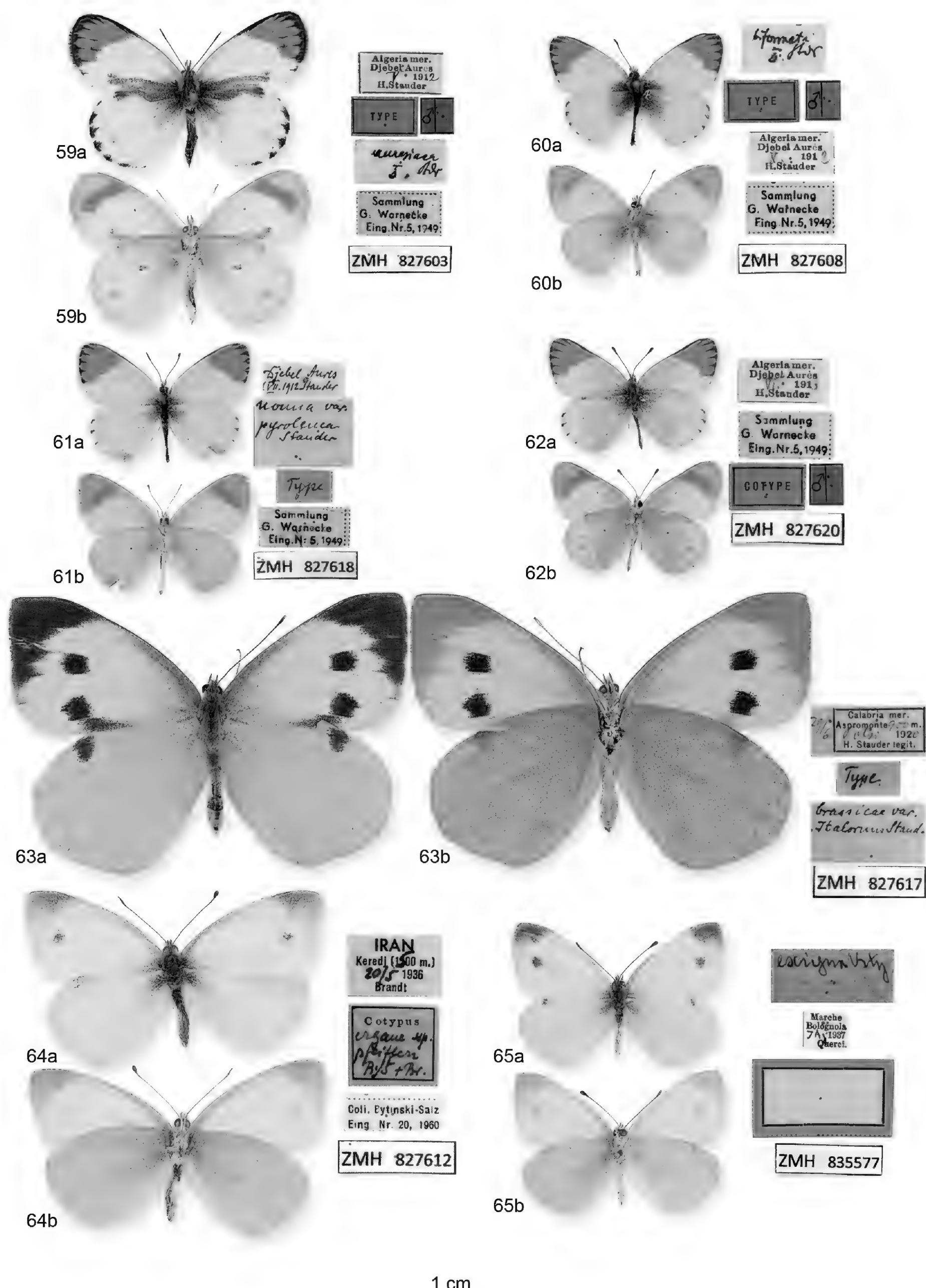
**Current combination.** *Pieris rapae* f. *rossioides* Stauder, 1921.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827627) (Fig. 66). “Calabria mer. / Aspromonte 800 m. / 4/7 [illegible] 1920 / H. Stauder legit.” // “Type” // “Rossioides Stdr.” // “rossioides / Stdr. / Type” // “ZMH 827627”.

**Original locality.** Italy: “Polsibeken, Aspromonte 7–900 m.”

**Remarks.** Stauder (1921) proposed this name as a form of *P. rapae* (Linnaeus, 1758). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work (please see below) unambiguously reveals that the name was proposed for an infrasubspecific entity. In the same paper, Stauder (1921) described another “form” of *P. rapae* as “*zelleri*” and clearly stated that it also occurs at the same “type locality” as *rossioides* (i.e., Aspromonte). As by definition two geographical races (or forms) cannot occur sympatrically; therefore, the content of the work reveals that such forms were not meant to be subspecific. However, Stauder added further complexity; there is a difference between how “*zelleri*” and “*rossioides*” have been described. In fact, the former was as ‘g. aest. mer. alt.’, i.e., generatio aestivalis meridionalis altitudinalis [Southern altitudinal summer generation], while the latter just as ‘f. n.’, i.e., “forma nova” [new form].



1 cm

**Plate 10.** **59.** *Colotis evagore nouna* f. *vernalis alticola auresiaca* (Stauder, 1913); **60.** *Colotis evagore nouna* f. *biformata* (Stauder, 1913); **61.** *Colotis evagore nouna* f. *aestiva pyroleuca* (Stauder, 1913); **62.** *Colotis evagore nouna* ab. *evagorides* (Stauder, 1913); **63.** *Pieris brassicae italorum* Stauder, 1921; **64.** *Pieris ergane elbursina* Bytinski-Salz & Brandt, 1937; **65.** *Pieris ergane* r. *exigua* Verity, 1923. **a.** Dorsal view, **b.** ventral view.

Thus, it could theoretically be argued that rossioides was meant as a geographical race, while zelleri would be a seasonal variation of that. However, this speculation does not seem to be correct, because it makes no sense that someone described a seasonal form of a subspecies before describing the subspecies itself. As a result, looking at the paper as a whole and not to the isolated description of rossioides alone, this name has to be considered as infrasubspecific (Alberto Zilli pers. comm.).

#### Unpublished, unavailable names

##### 67. ab. gottingensis Meinhard

**Original combination.** *Pieris napi* v. *napaeae* ab. *göttingensis* Meinhard.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂ (ZMH 835579) (Fig. 67). “v. *göttingensis* / Mht” // “8/5 1909 / Göttingen / Hainholz” // “ZMH 835579”.

**Remarks.** This taxon cannot be found in the literature. As stated by articles 45.6.1 and 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable.

##### 68. ab. nigromarginata Meinhard

**Original combination.** *Pieris brassicae* ab. *nigromarginata* Meinhard.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂ (ZMH 835576) (Fig. 68). “13/8 1916 / Göttingen / Hainberg” // “ZMH 835576”.

**Remarks.** This taxon cannot be found in the literature. As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

#### Family Lycaenidae Leach, 1815

##### Subfamily Aphnaeinae Distant, 1884

##### 69. *dueldueli* Pfeiffer, 1932

**Original combination.** “*Cigaritis acamas* Klug. ssp. n. *düldüli* m.” Pfeiffer, in Ostheder and Pfeiffer 1932, Mitt. Münch. Ent. Ges. 22: 38.

**Current combination.** *Cigaritis acamas* *dueldueli* Pfeiffer, 1932.

**Current status.** Valid subspecies.

**Type material.** Syntypes 3♂♂ (ZMH 827553–827555) (Fig. 69). “Syria s. / amanus / Düldül Dagh / VII.30” // “Cotypus / A. *epargyros* / ssp. *düldüli* / Pfeiffer” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827553”; “Syria sept. / amanus sept. / Düldül Dagh / VII.30” // “Cotypus / A. *epargyros* / ssp. *düldüli*

/ Pfeiffer” // “Coll. Bytinski Salz / Eing. Nr. 20, 1960” // “ZMH 827554”; “Syria sept. / amanus sept. / Düldül Dagh / VII.30” // “Cotypus / A. *epargyros* / ssp. *düldüli* / Pfeiffer” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827555”.

**Type locality.** Turkey: “Marasch in türkisch Nordsyrien; Im DD [Düldül Dagh].”

#### Subfamily Lycaeninae Leach, 1815

##### Tribe Lycaenini Leach, 1815

##### 70. f. *emarginata* Warnecke, 1942

**Original combination.** “*Chrysophanus alciphron* Rott., ♂, n. f *emarginata*.” Warnecke, 1942 Dt. Ent. Z. Iris 56: 103.

**Current combination.** *Lycaena alciphron* f. *emarginata* (Warnecke, 1942).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827527) (Fig. 70). “Schlesw. – Holst. / Kr. / Bockhorn / W. Wolf leg. / 14.7.40” // “Katalog Nr. / L 2322” // “♂ nf. *emarginata* / Warn. Type / Iris 1942, 103” // “*Chrysophanus* / *alciphron* / *emarginata* Warn. / Type / L.31” // “Sig. G. Warnecke / Eing. Nr. 5, 1945” // “ZMH 827527”.

**Original locality.** Germany: “Segeberg”; Schleswig-Holstein publication says Segeberg; the label of the specimen treated as type by Warnecke states Lauenburg crossed out and replaced by Bockhorn.

**Remarks.** Warnecke (1942) proposed this name as a form of *C. alciphron* (Rottemburg, 1775). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. Already the title of Warnecke (1942) paper reveals that this form was described as an aberration and not as a subspecies.

##### 71. ab. *alba* Schoenfeld, 1924

**Original combination.** “*Chrysophanus virgaureae* L.-♀, alba m., nov. ab.” Schoenfeld, 1924 Int. Ent. Z. 18: 40.

**Current combination.** *Lycaena virgaureae* ab. *alba* (Schoenfeld, 1924).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♀ (ZMH 827586) (Fig. 71). “Bayern / Mitterteich / 24.VIII.1923 / Schönfeld” // [blank label] // “Type / *Chr. virgaureae* L. / ab. *alba* Schönfeld / I. E. Z. Guben 18. Jahrg / 1924. Nr 6. P. 40 / [illegible]” // “ZMH 827586”.

**Original locality.** Germany: Bavaria.

**Remarks.** Schoenfeld (1924) proposed this name as an aberration of *C. virgaureae* (Linnaeus, 1758), therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

## 72. f. multipunctata Warnecke, 1942

**Original combination.** “*Chrysophanus virgaureae* L., ♂, n.f. multipunctata.” Warnecke, 1942 Dt. Ent. Z. Iris 56: 103.

**Current combination.** *Lycaena virgaureae* f. multipunctata (Warnecke, 1942).

**Current status.** Infrasubspecific and hence unavailable.

**Original material.** Labelled as “Type” 1♂ (ZMH 827592) (Fig. 72). “n.f. multipunctata / Warn. Type / Iris 1942, 103” // “*Chrysoph. virgaureae* / multipunctata / Type Warn. / L.30” // “Holstein” // “Katalog Nr. / L. 2196” // “Sig. G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827592”.

**Original locality.** Germany: Holstein.

**Remarks.** Warnecke (1942) proposed this name as a form of *C. virgaureae* (Linnaeus, 1758). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. The title and the text of Warnecke (1942) paper unambiguously reveals that this form was described as an aberration and not as a subspecies. It was only found in a single male.

## 73. f. quercii Turati, 1923

**Original combination.** “*Chrysophanus virgaureae emilianus* f. n. e. *quercii* f. n.” Turati, 1923 Atti. Soc. Ital. Sci. Nat. 62: 42.

**Current combination.** *Lycaena virgaureae emilianus* f. *quercii* (Turati, 1923).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 6♂♂ (ZMH 827580–827585) (Fig. 73). “Marche / Bolognola / 15.VII.1937 / Querci” // [blank label] // “quercii Trti.” // “ZMH 827580”; “Marche / Bolognola / 15.VII.1937 / Querci” // [blank label] // “quercii Trti.” // “ZMH 827581”; “Marche / Bolognola / 3 Ag 1937 / Querci” // [blank label] // “quercii Trti.” // “ZMH 827582”; “Marche / Bolognola / 27.VII.1937 / Querci” // [blank label] // “quercii Trti.” // “ZMH 827583”; “Marche / Bolognola / 5 Ag 1937 / Querci” // [blank label] // “quercii Trti.” // “ZMH 827584”; “Marche / Bolognola / 4 Ag 1937 / Querci” // [blank label] // “quercii Trti.” // “ZMH 827585”.

**Original locality.** Italy: “Monti Sibillini”.

**Remarks.** Turati (1923) proposed this name as a form of *C. v. emilianus* Turati, 1923. Therefore, as stated by article 45.6.1 (ICZN 1999) it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable.

## Subfamily Polyommatinae Swainson, 1827

### Tribe Polyommatini Swainson, 1827

## 74. andarabi Forster, 1938

**Original combination.** “*Lycaena pheretiades andarabi* ssp. nov.” Forster, 1937 Mitt. Münch. Ent. Ges. 27: 61.

**Current combination.** *Agriades pheretiades andarabi* (Forster, 1938).

**Current status.** Valid subspecies.

**Type material.** Paratypes 4♂♂ (ZMH 827575–827578) (Fig. 74). “West-Hindukusch / Andarab / Geröllzone / 4000–4500 m Mitte August / leg. H.&E. Kotzsch” // “Para-Type / *Lyc. Pheretiades* / *andarabi* Forst. / W. Forster München” // “Coll. Bytinski Salz / Eing. Nr 20, 1960” // “ZMH 827575”; “Nord-Ost-Hindukusch / Nukan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H.&E. Kotzsch” // “Para-Type / *Lyc. Pheretiades* / *andarabi* Forest. / W. Forster München” // “Coll. Bytinski-Salz / Eing. Nr 20, 1960” // “ZMH 827576”; “West-Hindukusch / Andarab / Geröllzone / 4000–4500 m Mitte August / leg. H.&E. Kotzsch” // “Para-Type / *Lyc. Pheretiades* / *andarabi* Forest. / W. Forster München” // “Coll. Bytinski Salz / Eing. Nr 20, 1960” // “ZMH 827577”; “West-Hindukusch / Andarab / Geröllzone / 4000–4500 m Mitte August / leg. H.&E. Kotzsch” // “Para-Type / *Lyc. Pheretiades* / *andarabi* Forest. / W. Forster München” // “Coll. Bytinski-Salz / Eing. Nr 20, 1960” // “ZMH 827578”.

**Type locality.** Afghanistan: “West-Hindukusch, Andarab, 4000–4500 m.”

## 75. f. altera Züllich, 1929

**Original combination.** “*Lycaena anteros* Frr. f. altera” Züllich, 1929 Z. Öst. Ent. Ver. 14: 52.

**Current combination.** *Aricia anteros* f. altera (Züllich, 1929).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827526) (Fig. 75). “BULGARIA OR. / GIOKTEPE 250 M / MITTE AUG 1928 / COLL. ZUELICH” // “ExTypicalibus / Specimenibus” // “VIII 1928 / Giöktepe, / Bulgarien” // “ZMH 827526”.

**Original locality.** Bulgaria: “Rilogebeit, Südwestbulgarien, 1200 m, und Gioktepe, Südostbulgarien, 200 m.”

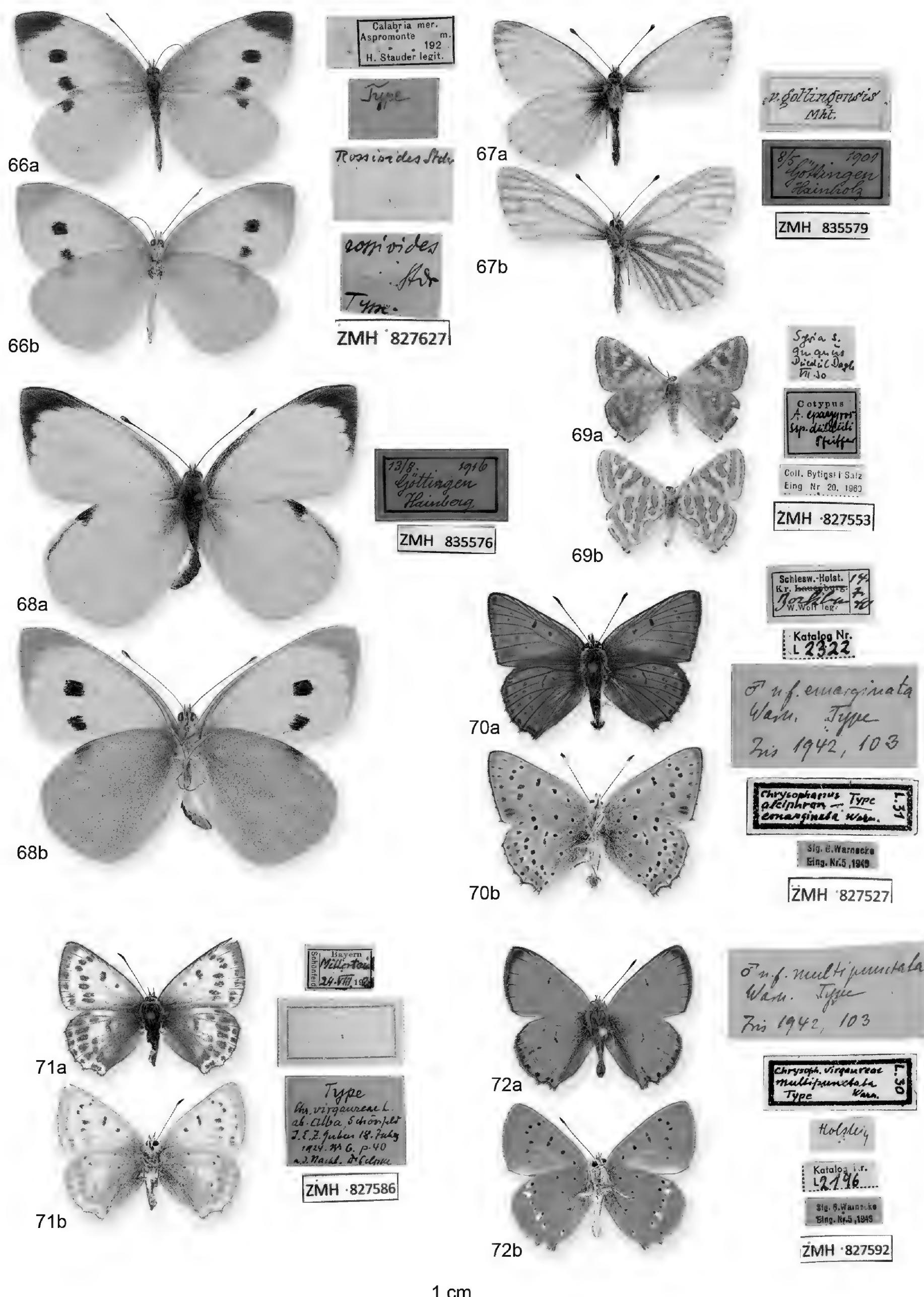
**Remarks.** Züllich (1929) proposed this name as a form of *L. anteros* Freyer, 1839. According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. The text of Züllich (1929: 52) unambiguously reveals that this form was described explicitly for the summer generation.

## 76. r. modiciar Verity, 1938

**Original combination.** “*Aricia anteros*, Frr. modiciar, nom. nov.” Verity, 1938 Ent. Rec. 50(8): Suppl. (5).

**Current combination.** *Aricia anteros* r. modiciar Verity, 1938.

**Current status.** Infrasubspecific and hence unavailable name.



**Plate 11.** **66.** *Pieris rapae* f. *rossioides* Stauder, 1921; **67.** *Pieris napi* v. *napaea* ab. *gottingensis* Meinhard; **68.** *Pieris brassicae* ab. *nigromarginata* Meinhard; **69.** *Cigaritis acamas* *duelduelli* Pfeiffer, 1932; **70.** *Lycaena alciphron* f. *emarginata* (Warnecke, 1942); **71.** *Lycaena virgaureae* ab. *alba* (Schoenfeld, 1924); **72.** *Lycaena virgaureae* f. *multipunctata* (Warnecke, 1942). **a.** Dorsal view, **b.** ventral view.

**Original material.** Labelled as “Type” 2♂♂, (ZMH 827535–827536) (Fig. 76). “modicior Vrty” // “Macedonia / Olympus, 4500’ / July 2, 1935 / Romei” // [blank label] // “ZMH8274535”; “modicior Vrty” // “anteros Frr.” // “Macedonia / Olympus, 4500’ / July 14, 1935 / Romei” // [blank label] // “ZMH8274536”.

**Original locality.** Greece: “At the highest altitudes of Mt. Olympus, such as at Priona, 1500 m”.

**Remarks.** According to Kudrna (1983: 32), this name is unavailable and denotes a race and seasonal form and is hence unavailable.

### 77. *uliginosa* Dannehl, 1921

**Original combination.** “*Lycaena argus* Schiff. var. *uliginosa*” Dannehl, 1921 Mitt. Münch. Ent. Ges. 11: 39.

**Current combination.** *Plebejus idas uliginosa* (Dannehl, 1921).

**Current status.** Junior subjective synonym of *Plebejus argus argus* (Linnaeus, 1758).

**Type material.** Syntypes 4♂♂, (ZMH 827541–827542, ZMH 835595–835596) (Fig. 77). “18.7” // “Ob. Bayern / Beuerberg / c. Dannehl 20” // “Argus v. n. / *uliginosa*” // “Katalog Nr. / L 2562” // “Cotype” // “L.34 / *Lyc. argus* - / v. *uliginosa* Dannehl / ♂ Cotype” // Sig. G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827541”; “18.7” // “Ob. Bayern / Beuerberg / c. Dannehl 20” // “v. *uliginosa* / Dannehl” // “Cotype” // “Katalog Nr. / L 2561” // “L.35 / *Lyc. argus* - / v. *uliginosa* Dannehl / ♀ Cotype” // Sig. G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827542”; “27.6” // Ob. Bayern / Beuerberg / F. Dannehl” // “Cotype” // “27.6. 1921 / Beuerberg / Oberbayern / v. Dannehl” // “ZMH 835595”; “13.7” // Ob. Bayern / Beuerberg / F. Dannehl” // “Cotype” // “13.7. 1921 / Beuerberg / Oberbayern / v. Dannehl” // “ZMH 835596”.

**Type locality.** Germany: Bavaria, Beuerberg.

**Remarks.** Dannehl (1921) proposed this name as a “var.” of *L. argus* ([Denis & Schiffermüller], 1775). *L. argus* is a junior subjective synonym of *Plebejus idas* Linnaeus, [1760]. According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term “var.”.

### 78. *balcanica* Züllich, 1929

**Original combination.** “*Lycaena argyrogномон* Bgstr. f. *balcanica*” Züllich, 1929 Z. Öst. Ent. Ver. 14: 52.

**Current combination.** *Plebejus argyrogномон balcanica* (Züllich, 1929).

**Current status.** Preoccupied by *Lycaena semiargus balcanica* Tutt, 1909; replacement name *Lycaeides argyrogномон baldur* (Hemming, 1934) is the current valid name.

**Type material.** Holotype 1♂ (ZMH 827544) (Fig. 78) paratype 1♂ (ZMH 827543). “BULGARIA

OCC. // MON. RILSKI 1200 M / 20. – 31 VII. 1928 // COLL. ZUELICH” // “Ex Typicalibus / Specimini- bus” // “Holotype” // “Coll. Bytinski-Salz / Eing Nr 20, 1960” // ZMH 827544”; “BULGARIA OCC. // MON. RILSKI 1400 M / 20 VI. – 6 VII. 1928 // COLL. ZU- ELLICH” // “Ex Typicalibus / Speciminibus” // “Para- typoid” // “Coll. Bytinski-Salz / Eing Nr 20, 1960” // ZMH 827543”.

**Type locality.** Bulgaria: “MON. RILSKI” [Monastery Rilski].

**Remarks.** Züllich (1929) proposed this name as a form of *L. argyrogномон* (Bergsträsser, 1779). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term “form”.

### 79. *mayencis* Eitschberger & Steiniger, 1975

**Original combination.** “*Eumedonia eumedon mayencis* n. subsp.” Eitschberger & Steiniger, 1975 Atalanta 6 (1): 106.

**Current combination.** *Eumedonia eumedon mayencis* Eitschberger & Steiniger, 1975.

**Current status.** Valid subspecies.

**Type material.** Paratypes 5♂♂ (ZMH 827548–827552) (Fig. 79). “Gonsenheim / 5. Juni / 04 / ANDREAS / Gonsenheim” // “PARATYPUS o / *Eumedonia eu- / medon mayencis* / EITSCHBERGER & / STEINIGER, 1975” // “Coll. Bytinski Salz / Eing. Nr 20, 1960” // “ZMH 827548”; “Gonsenheim / 5. Juni / 04 / ANDREAS / Gonsenheim” // “PARATYPUS o / *Eumedonia eu- / medon mayencis* / EITSCHBERGER & / STEINIGER, 1975” // “Coll. Bytinski Salz / Eing. Nr 20, 1960” // “ZMH 827549”; “Mainz / Mombach / 10.6.1922” // “Eumedon” // “PARATYPUS o / *Eumedonia eu- / medon mayencis* / EITSCHBERGER & / STEINIGER, 1975” // “Coll. Bytinski Salz / Eing. Nr 20, 1960” // “ZMH 827550”; “Gonsenheim / 8. Juni / 04 / ANDREAS / Gonsenheim” // “PARATYPUS o / *Eumedonia eu- / medon mayencis* / EITSCHBERGER & / STEINIGER, 1975” // “Coll. Bytinski Salz / Eing. Nr 20, 1960” // “ZMH 827551”; “Mainz / Mombach / 10.6.1922” // “Eumedon” // “PARATYPUS o / *Eumedonia eu- / medon mayencis* / EITSCHBERGER & / STEINIGER, 1975” // “Coll. Bytinski Salz / Eing. Nr 20, 1960” // “ZMH 827552”.

**Type locality.** Germany: “Deutschland, Rheinland-Pfalz, Mainz-Mombach, Mainzer Sand”.

### 80. *moenus* Eitschberger & Steiniger, 1975

**Original combination.** “*Eumedonia eumedon moenus* n. subsp.” Eitschberger & Steiniger, 1975 Atalanta 6 (2): 99.

**Current combination.** *Eumedonia eumedon moenus* Eitschberger & Steiniger, 1975.

**Current status.** Valid subspecies.

**Type material.** Paratypes 2♂♂ (ZMH 827546–827547) (Fig. 80). “Tiertalsberg bei / Retzbach am Main

/ 4.6.1950” // “Katalog Nr. / L 3370” // “PARATYPUS o / *Eumedonia eume-* / *don moenus* / EITSCHBERGER & / STEINIGER, 1975” // “Bot.-Zool. Excursion / 1950/ Eing Nr. 14—1950” // “ZMH 827546”; “Karlstadt a. Main / Karlsburg / 4.6.1950” // “Katalog Nr. / L 3369” // “PARATYPUS o / *Eumedonia eume-* / *don moenus* / EITSCHBERGER & / STEINIGER, 1975” // “Bot.-Zool. Excursion / 1950/ Eing Nr. 14—1950” // “ZMH 827547”.

**Type locality.** Germany: “Deutschland, Nordbayern, mittleres Maintal und Nord-Baden, mittleres Taubertal.”

### 81. *persa* Bytinski-Salz & Brandt, 1937

**Original combination.** “*Chilades trochylus*, Frr. ssp. *persa*, ssp. nov.” Bytinski-Salz & Brandt, 1937 Ent. Rec. 49: Suppl. (2).

**Current combination.** *Freyeria trochylus persa* (Bytinski-Salz & Brandt, 1937).

**Current status.** Valid subspecies.

**Type material.** Syntypes 4♂♂ (ZMH 827587–827590) (Fig. 81). “IRAN / Keredj (1600 m.) / 3/6 1936 / Brandt” // “Cotypus / *Ch. trochylus* / ssp. *persa* / By.S + Br.” // “Coll. Bytinski-Salz / Eing. Nr 20, 1960” // “ZMH 827587”; “IRAN / Keredj (1600 m.) / 9/8 1936 / Brandt” // “Cotypus / *Ch. trochylus* / ssp. *persa* / By.S + Brandt” // “Coll. Bytinski-Salz / Eing. Nr 20, 1960” // “ZMH 827588”; “IRAN / Keredj (1600 m.) / 12/8 1936 / Brandt” // “Cotypus / *Ch. trochylus* / ssp. *persa* / By.S + Br.” // “Coll. Bytinski-Salz / Eing. Nr 20, 1960” // “ZMH 827589”; “IRAN / Keredj (1600 m.) / 3/6 1936 / Brandt” // “Cotypus / *Ch. trochylus* / ssp. *persa* / ByS + Br.” // “Coll. Bytinski-Salz / Eing. Nr 20, 1960” // “ZMH 827590”.

**Type locality.** Iran: Tehran, “Keredj” [Karaj].

### 82. *ab. pauper* Bytinski-Salz & Brandt, 1937

**Original combination.** “*Chilades trochylus*, Frr. ssp. *persa*, ssp. nov. ab. *pauper*, ab. nov.” Bytinski-Salz & Brandt, 1937 Ent. Rec. 49: Suppl. (2).

**Current combination.** *Freyeria trochylus persa ab. pauper* (Bytinski-Salz & Brandt, 1937).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Holotype” ♀ (ZMH 827591) (Fig. 82). “IRAN / Keredj (1600 m.) / 25/5 1936 / Brandt” // “ab. *pauper* / ByS+Br. / Holotype ♀ / ex. coll. / Dr. H. Bytinski-Salz” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827591”.

**Original locality.** Iran: Tehran, “Keredj” [Karaj].

**Remarks.** Bytinski-Salz and Brandt (1937) proposed this name as an aberration of *C. trochylus* (Freyer, 1838). Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

### 83. *parvandereggi* Verity, 1938

**Original combination.** “*Glaucopsyche cyllarus*, Rott, race *parvandereggi*, nom. nov.” Verity, 1938 Ent. Rec. 50: Suppl. (4).

**Current combination.** *Glaucopsyche alexis parvandereggi* Verity, 1938.

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 833470–833471) (Fig. 83). “*parvandereggi* Vrty” // “Macedonia / Olympus, 2900’ / V. 25, 1936 / Romei” // [blank label] // “ZMH 833470”; “*parvandereggi* Vrty” // “Macedonia / Olympus, 2900’ / V. 26, 1936 / Romei” // [blank label] // “ZMH 833471”.

**Type locality.** Greece: Salonika [Macedonia, Olympus].

**Remarks.** Verity (1938) proposed this name as a race of *G. cyllarus* (Rottemburg, 1775). As it was given in trinomy and the content of the description clearly indicates that a geographical race was meant, this name is fully available as subspecific (article 45.6 ICZN 1999). (Alberto Zilli pers. comm.).

### 84. *sibyllina* Verity, 1916

**Original combination.** “*Lycaena coridon*” Poda, “razza *sibyllina*” Verity, 1916 Boll. Soc. Ent. Ital. 46: 133.

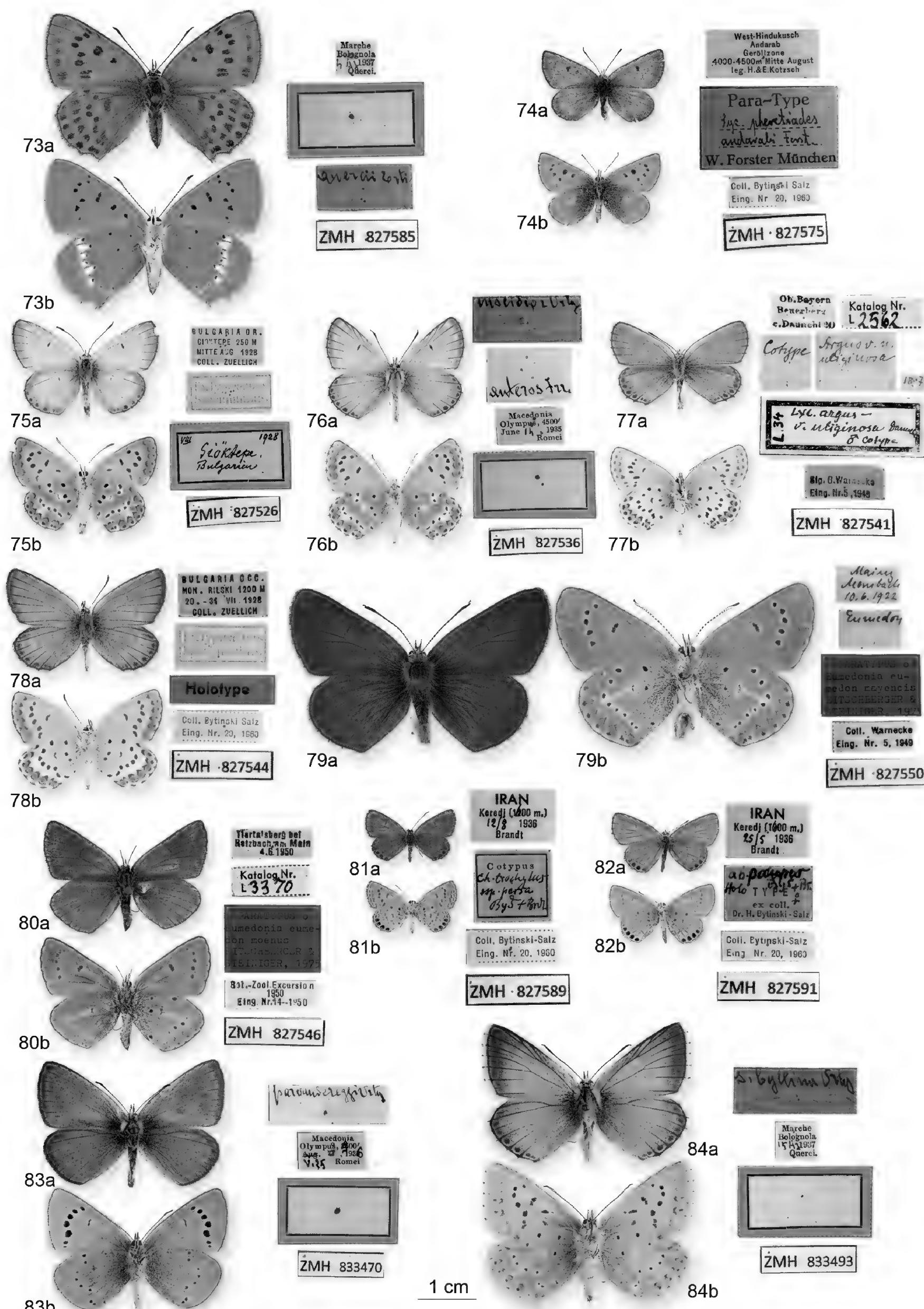
**Current combination.** *Lysandra coridon sibyllina* (Verity, 1916).

**Current status.** Junior subjective synonym of *Lysandra coridon apennina* (Zeller, 1847).

**Original material.** Labelled as “Type” 4♂♂ (ZMH 833493–833496) (Fig. 84). “*sibyllina* Vrty” // “Marche / Bolognola / 15 Ag 1937 / Querci” // [blank label] // “ZMH 833493”; “*sibyllina* Vrty” // “Marche / Bolognola / 9 Ag 1937 / Querci” // [blank label] // “ZMH 833494”; “*sibyllina* Vrty” // “Marche / Bolognola / 9 Ag 1937 / Querci” // [blank label] // “ZMH 833495”; “*sibyllina* Vrty” // “Marche / Bolognola / 8 Ag 1937 / Querci” // [blank label] // “ZMH 833496”.

**Original locality.** Italy: “Monti Sibillini (Bolognola, 1200 m)”

**Remarks.** Verity (1938) proposed this name as a “razza” (=race) of *L. coridon* (Poda, 1761). As it was given in trinomy and the content of the description clearly indicates that a geographical race was meant, this name is available as subspecific (article 45.6 ICZN 1999). However, it was later synonymized with *L. coridon apennina* (Zeller, 1847). The year on the specimen labels (1937) indicate specimens were collected 21 years after description (1916) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these four specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens.



**Plate 12.** 73. *Lycaena virgaureae emilianus* f. *quercii* (Turati, 1923); 74. *Agriades pheretiades andarabi* (Forster, 1938); 75. *Aricia anteros* f. *altera* (Züllich, 1929); 76. *Aricia anteros* f. *modiciar* Verity, 1938; 77. *Plebejus idas uliginosa* (Dannehl, 1921); 78. *Plebejus argyrogynon balcanica* (Züllich, 1929); 79. *Eumedonia eumedon mayencis* Eitschberger & Steiniger, 1975; 80. *Eumedonia eumedon moenus* Eitschberger & Steiniger, 1975; 81. *Freyeria trochylus persa* (Bytinski-Salz & Brandt, 1937); 82. *Freyeria trochylus persa* ab. *pauper* (Bytinski-Salz & Brandt, 1937); 83. *Glauopsyche alexis parvandereggi* Verity, 1938; 84. *Lysandra coridon sibyllina* (Verity, 1916). **a.** Dorsal view, **b.** ventral view.

### 85. f. lunulata Warnecke, 1942

**Original combination.** “*Lycaena alcon* F., ♀, n. f. *lunulata*.” Warnecke, 1942 Dt. Ent. Z. Iris 56: 103.

**Current combination.** *Phengaris alcon* f. *lunulata* (Warnecke, 1942).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♀ (ZMH 827528) (Fig. 85). “Bahrenfeld / 28.7.08” // “Sig. S. Warnecke / Eing. Nr. 5 1949” // “♀ n.f. *lunulata* / Warn. Type / Iris 1942, 103” // “Katalog Nr. L 32 67” // “ZMH 827528”.

**Original locality.** Germany: Eidelstedt, Hamburg.

**Remarks.** Warnecke (1942) proposed this name as a form of “*L. alcon* F.” (sic, recte: [Denis & Schiffermüller], 1775). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. The title of the paper (Warnecke, 1942) indicates that this form constitutes an aberration and is therefore infrasubspecific and unavailable. According to the description this form was only found in a single female.

### 86. f. selzeri Warnecke, 1924

**Original combination.** “*Lycaena arionides* Staudinger f. *selzeri*” Warnecke, 1924 Dt. Ent. Z. Iris 38: 149.

**Current combination.** *Phengaris arionides* f. *selzeri* (Warnecke, 1924).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827545) (Fig. 86). “Ussuri” // “F. selzeri Warn. / ♂ Type” // “n.f. *selzeri* Warn. / I. Iris 1924, 38. J. / p. 149, Taf. II bis. 5.” // “Type” // “*Lyc. arionides* - / n.f. selzeri Warn. / L.33” // “Katalog Nr. / L 3336” // “Sig. G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827545”.

**Original locality.** Russia: “Ostsibirien, Amur-Gebiet, Ussuri”.

**Remarks.** Warnecke (1942) proposed this name as a form of *L. arionides* Staudinger, 1887. According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. According to the description this form is an individual aberration or a rare second generation and is therefore infrasubspecific. Accordingly, on plate II this form is figured as “*Lycaena arionides* nov. ab. *selzeri* Warn.”.

### 87. *peninsulae* Verity, 1923

**Original combination.** “*Lycaena euphemus*, Hüb. (a) race *peninsulae*, mihi” Verity, 1923 Ent. Rec. 35 Suppl. (7).

**Current combination.** *Phengaris euphemus* *peninsulae* (Verity, 1923).

**Current status.** Valid subspecies.

**Original material.** Labelled as “Type” 1♂ (ZMH 833468) (Fig. 87). “peninsulae Vrty” // “Marche / Bolognola / 10.VI.1937 / Querci / 1300 m” // [blank label] // “ZMH 833468”.

**Original locality.** Italy: “Sibillini Mts. in the Marche, below Bolognola, at 1000 m”.

**Remarks.** Verity (1923) proposed this name as a race of *L. euphemus* Hübner, 1799–1800. According to Kudrna (1983: 35), this race represents an available subspecific name. However, the year on the specimen labels (1937) indicate specimens were collected 14 years after description (1923) from the same location (i.e., Italy: Bolognola) the original type material was collected. As a result, the black label of the specimens treated as “type” by Verity is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, this specimen is erroneously labelled as type, should be annotated as “Not a Type” and are treated here as “Non-type” specimen.

### 88. ab. *depuncta* Hirschke, 1903

**Original combination.** “*Lycaena Argiades* ab. (et var.) *depuncta*” Hirschke, 1903 Verh. Ges. Wien. 53: 270.

**Current combination.** *Cupido argiades* ab. *depuncta* (Hirschke, 1903).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827531) (Fig. 88). “Hirschke. Wien / Herkulsbad / V.1900 Type” // “Verh. zool. / bot. ges. / 1903 Hirs.” // “TYPE” // “ZMH 827531”.

**Original locality.** Romania: “Herkulesbad”.

**Remarks.** Hirschke (1903) proposed this name as an aberration of *L. argiades* (Pallas, 1771). Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

### 89. *ausonia* Verity, 1913

**Original combination.** “*Lycaena damon* *ausonia* nom. nov.” Verity, 1913 Boll. Soc. Ent. Ital. 45: 232, pl. 1, f. 44, 47.

**Current combination.** *Polyommatus* (*Agrodiaetus*) *damon ausonia* (Verity, 1913).

**Current status.** Junior subjective synonym of *Polyommatus* (*Agrodiaetus*) *damon damon* ([Denis & Schiffermüller], 1775).

**Original material.** Labelled as “Type” 6♂♂ (ZMH 833479–833484) (Fig. 89). “*ausonia* Vrty.” // “Marche / Bolognola / 15.VII.1937 / Querci” // [blank label] // “ZMH 833479”; “*ausonia* Vrty.” // “Marche / Bolognola /

15.VII.1937 / Querci” // [blank label] // “ZMH 833480”; “ausonia Vrty.” // “Marche / Bolognola / 12.VII.1937 / Querci” // [blank label] // “ZMH 833481”; “ausonia Vrty.” // “Marche / Bolognola / 5 Ag 1937 / Querci” // [blank label] // “ZMH 833482”; “ausonia Vrty.” // “Marche / Bolognola / 3 Ag 1937 / Querci” // [blank label] // “ZMH 833483”; “ausonia Vrty.” // “Marche / Bolognola / 12.VII.1937 / Querci” // [blank label] // “ZMH 833484”.

**Original locality.** Italy: “a grandi altitudini nei soliti monti del Piceno” [At high elevations at Mount del Piceno].

**Remarks.** The year on the specimen labels (1937) indicate specimens were collected 24 years after description (1913) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these six specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens.

#### 90. *pfeifferi* Brandt, 1938

**Original combination.** “*Lycaena Pfeifferi* sp. n.” Brandt, 1938 Ent. Rdsch. 55: 671, pl. 4, f. 1–3.

**Current combination.** *Polyommatus (Agrodiaetus) pfeifferi* (Brandt, 1938).

**Current status.** Valid species.

**Type material.** Paratype 1♂ (ZMH 827579) (Fig. 90). “IRAN. FARS, Straße / Ardekan – Talochosroe / Comé, m, 1937 / coll. Brandt” // “L.37 / Paratypoid / *Lyc. pfeifferi* Brandt” // “Katalog Nr. / L. 3190” // “Sammlung R. Jähnig / Eing. Nr. 29, 1949” // “ZMH 827579”.

**Type locality.** Iran: Fars “vom Barm I Firuz (3750 m)” [from Barm-e Firuz].

#### 91. *alcestis* Zerny, 1932

**Original combination.** “*Lycaena (Hirsutina) ripperti alcestis* Zerny nov. subsp.” Zerny, 1932 Dt. Ent. Z. Iris 46: 186.

**Current combination.** *Polyommatus (Agrodiaetus) alcestis* (Zerny, 1932).

**Current status.** Valid species.

**Type material.** Syntypes 2♂♂ (ZMH 827529–827530) (Fig. 91). “Syria / Libanon s. / Bscharre / VIII-IX 31 / 1300 m / Einh.Slr.leg” // “Cotypus / *ripperti* / ssp. *alcestis* / Zerny” // “Coll. Bytinski-Salz / Eing Nr 20, 1960” // “ZMH 827529”; “Syria / Libanon s. / Bscharre / VIII-IX 31 / 1300 m / Einh.Slr.leg” // “Cotypus / *ripperti* / ssp. *alcestis* / Zerny” // “Coll. Bytinski-Salz / Eing Nr 20, 1960” // “ZMH 827530”.

**Type locality.** “Lebanon, Becharré, 1400 m; Zedernwald oberhalb Becharré um 1900 m”.

#### 92. *ardschira* Brandt, 1938

**Original combination.** “*Lycaena ardschira* sp. n.” Brandt, 1938 Ent. Rdsch. 55: 672.

**Current combination.** *Polyommatus (Agrodiaetus) ardschira* (Brandt, 1938).

**Current status.** Valid species.

**Type material.** Paratype 1♂, (ZMH 827532) (Fig. 92). “L.36 / Paratypoid / *Lyc. ardschira* / Brandt” // “Paratypoid” // “IRAN. FARS, Straße / Ardekan – Talochosroe / Comé, m, 1937 / coll. Brandt” // “196” // “Sammlung / R. Jähnig / Eing. Nr. 29, 1949” // “Katalog Nr. / L. 3365” // “ZMH 827532”.

**Type locality.** Iran: Fars, “Comée, 2600 m” [Komehr].

#### 93. f. *squalida* Verity, 1920

**Original combination.** “*Polyommatus meleager*, Esp., race *macra*, mihi, ♀ form *squalida*, mihi” Verity, 1920 Ent. Rec. 32:145.

**Current combination.** *Polyommatus daphnis macra f. squalida* Verity, 1920.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 2♂♂ (ZMH 833485–833486) (Fig. 93). “*squalida* Vrty” // “Marche / Bolognola / 15.VII.1937 / Querci” // [blank label] // “ZMH 833485”; “*squalida* Vrty” // “Marche / Bolognola / 3 Ag 1937 / Querci” // [blank label] // “ZMH 833486”.

**Original locality.** Italy: “Mt. Sibillina, 1200–1300 m”.

**Remarks.** Verity (1920) proposed this name as a form of *P. meleager macra* Verity, 1920. According to Kudrna (1983: 39), this name is unavailable and denotes a race and is infrasubspecific and hence unavailable. *Papilio meleager* Esper, 1779 is a junior subjective synonym of *Papilio daphnis* [Denis & Schiffermüller], 1775. The year on the specimen labels (1937) indicate specimens were collected 17 years after description (1920) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these two specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens.

#### 94. r. *correpta* Verity, 1920

**Original combination.** “*Agriades hylas*, Esp., race *correpta*, mihi” Verity, 1920 Ent. Rec. 32: 144.

**Current combination.** *Polyommatus dorylas r. correpta* (Verity, 1920).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 4♂♂ (ZMH 833489–833492) (Fig. 94). “correpta Vrty” // “Marche / Bolognola / 15.VII.1937 / Querci / 1500 m” // [blank label] // “ZMH 833489”; “correpta Vrty” // “Marche / Bolognola / 14.VII.1937 / Querci / 1400 m” // [blank label] // “ZMH 833490”; “correpta Vrty” // “Marche / Bolognola / 29.VII.1937 / Querci / 1600 m” // [blank label] // “ZMH 833491”; “correpta Vrty” // “Marche / Bolognola / 12.VII.1937 / Querci / 1500 m” // [blank label] // “ZMH 833492”.

**Original locality.** Italy: “Bolognola, Central Italy”.

**Remarks.** Verity (1920) proposed this name as a race of *A. hylas* (Esper, 1779). According to Kudrna (1983: 26), this name is unavailable as it denotes a seasonal form which is infrasubspecific and hence unavailable. The year on the specimen labels (1937) indicate specimens were collected 17 years after description (1920) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these four specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens.

## 95. *olympena* Verity, 1936

**Original combination.** “*L. escheri*, Hüb. race *olympena*, nom. nov.” Verity, 1936 Ent. Rec. 48: 8.

**Current combination.** *Polyommatus escheri olympena* (Verity, 1936).

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 833487–833488) (Fig. 95). “*olympena* Vrty” // “Macedonia / Olympus, 2500' / July 13, 1935 / Romei” // [blank label] // “ZMH 833487”; “*olympena* Vrty” // “Macedonia / Olympus, 2500' / July 9, 1936 / Romei” // [blank label] // “ZMH 833488”.

**Type locality.** Greece: “Mt. Olympus, from 850 to 1500 m.”

**Remarks.** Verity (1936) proposed this name as a race of *L. escheri* Hübner, 1823. According to Kudrna (1983: 34), this race represents an available subspecific name.

## 96. ab. *privata* Schönfeld, 1924

**Original combination.** “*Lycaena icarus*” Rott.-♂ “ab. *privata* m., nom. ab.” Schönfeld, 1924 Int. Ent. Z. 18: 40.

**Current combination.** *Polyommatus icarus ab. privata* (Schönfeld, 1924).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827573) (Fig. 96). “14.5. 1921 / Kl. Chuchel / Böhmen /

von Schönfeld” // “Type / *Lyc. icarus* Rott. ♂ / ab. *privata* Schönfeld / I.E.Z. Guben. 18. Jahr. Nr 6 / 1924. a.d. nachl. v. Schönfeld. / D. Gelpke” // “Kl – Chuchel / 14.5.21” // “ZMH 827573”.

**Original locality.** Czech Republic: “in der Umgebung von Prag (bei Kuchelbad)” [in the vicinity of Prague (near Kuchelbad)].

**Remarks.** Schönfeld (1924) proposed this name as an aberration of *L. icarus* Rottemburg, 1775. Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

## 97. *nuksani* Forster, 1937

**Original combination.** “*Lycaena candalus nuksani* ssp. nov.” Forster, 1937 Mitt. Münch. Ent. Ges. 27: 62.

**Current combination.** *Polyommatus (Sublysandra) nuksani* (Forster, 1937).

**Current status.** Valid species.

**Type material.** Paratypes 2♂♂ 2♀♀, (ZMH 827537–827540) (Fig. 97). “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H.&E. Kotzsch” // “Para-Type / *Lyc. candalus / nuksani* Forst. / W. Forster München” // “Coll. Bytinski-Salz / Eing. Nr. 20 – 60” // “ZMH 827537”; “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H.&E. Kotzsch” // “Para-Type / *Lyc. candalus / nuksani* Forst. / W. Forster München” // “Coll. Bytinski-Salz / Eing. Nr. 20 – 60” // “ZMH 827538”; “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H.&E. Kotzsch” // “Para-Type / *Lyc. candalus / nuksani* Forst. / W. Forster München” // “Coll. Bytinski-Salz / Eing. Nr. 20 – 60” // “ZMH 827539”; “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H.&E. Kotzsch” // “Para-Type / *Lyc. candalus / nuksani* Forst. / W. Forster München” // “Coll. Bytinski-Salz / Eing. Nr. 20 – 60” // “ZMH 827540”.

**Type locality.** Afghanistan: “Nordost-Hindukusch, Nuksan-Paß Nordseite, 3500–4000 m.”.

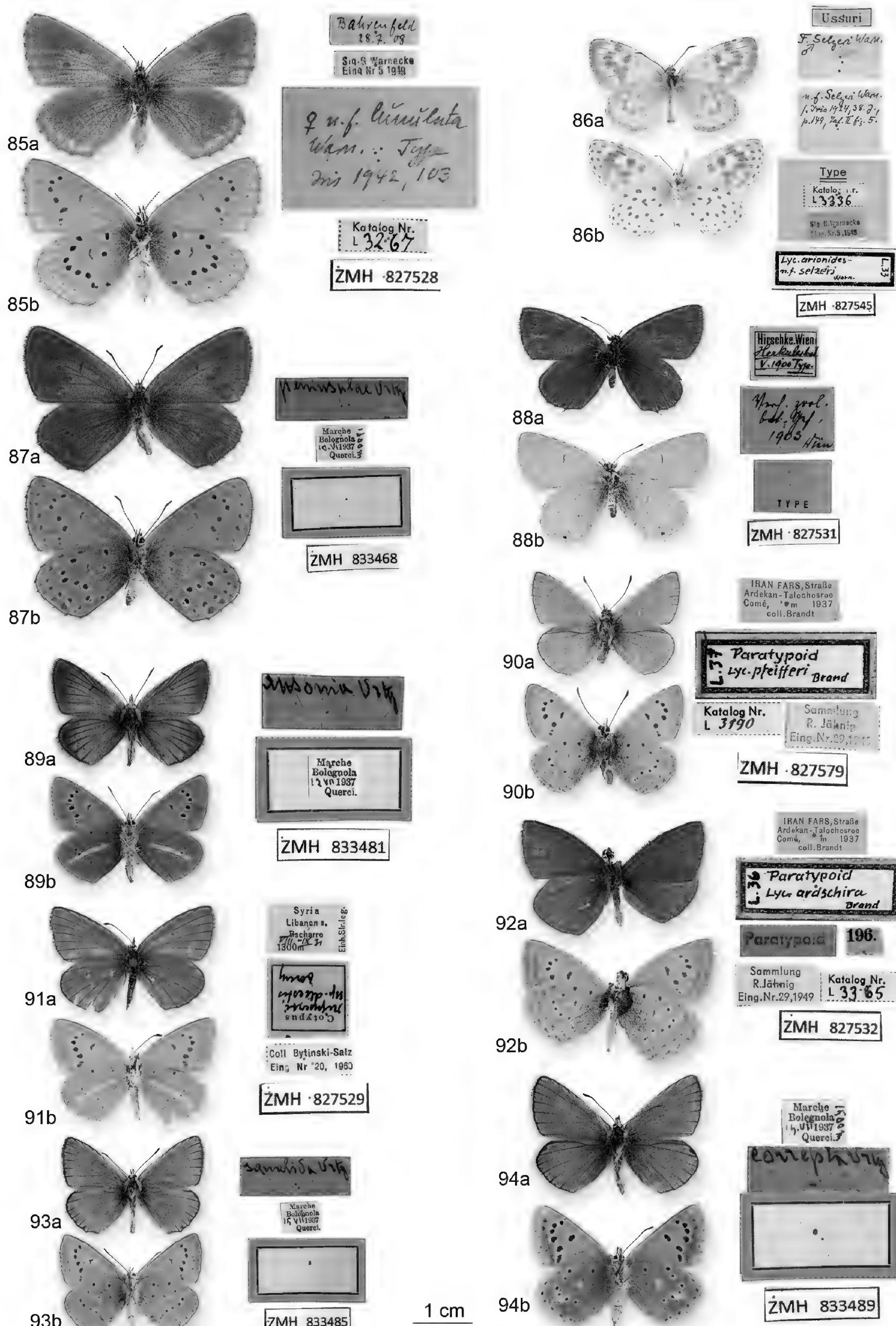
## 98. ab. *clorinda* Verity, 1938

**Original combination.** “*Tarucus balkanica*, Freyer, with I gen. *clorinda*, nom. nov.” Verity, 1938 Ent. Rec. 50: (8).

**Current combination.** *Tarucus balkanica ab. clorinda* Verity, 1938.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 2♂♂ (ZMH 835592–835593) (Fig. 98). “*clorinda* Vrty” // “Macedonia / Salonika, 1000' / May 31, 1935 / Romei” // [blank label] // “ZMH 835592”; “*clorinda* Vrty” // “Macedonia /



**Plate 13.** **85.** *Phengaris alcon* f. *lunulata* (Warnecke, 1942); **86.** *Phengaris arionides* f. *selzeri* (Warnecke, 1924); **87.** *Phengaris euphemus peninsulae* (Verity, 1923); **88.** *Cupido argiades* ab. *depuncta* (Hirschke, 1903); **89.** *Polyommatus* (*Agrodiaetus*) *daemon ausonia* (Verity, 1913); **90.** *Polyommatus* (*Agrodiaetus*) *pfeifferi* (Brandt, 1938); **91.** *Polyommatus* (*Agrodiaetus*) *alcestis* (Zerny, 1932); **92.** *Polyommatus* (*Agrodiaetus*) *ardschira* (Brandt, 1938); **93.** *Polyommatus daphnis macra* f. *squalida* Verity, 1920; **94.** *Polyommatus dorylas* r. *correpta* (Verity, 1920). **a.** Dorsal view, **b.** ventral view.

Salonika, 1000' / May 31, 1935 / Romei" // [blank label] // "ZMH 835593".

**Original locality.** Greece: "Salonika".

**Remarks.** Verity (1938) proposed this name as an aberration of *T. balkanica* (Freyer, 1844). Therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used "aberration", "ab.") and is hence unavailable.

## 99. *ahasveros* Bytinski-Salz & Brandt, 1937

**Original combination.** "*Lycaena (Glaucopsyche) panagaea*, H.-Sch. ssp. *ahasveros* ssp. nov." Bytinski-Salz & Brandt, 1937 Ent. Rec. 49: Suppl. (2).

**Current combination.** *Turanana panagaea ahasveros* (Bytinski-Salz & Brandt, 1937).

**Type material.** Paratypes 14♂♀ (ZMH 827556–827569) (Fig. 99). "IRAN: / Keredj (1700 m.) / 6.5.1936 / Brandt" // "Cotypus / *L. panagaea* / ssp. *ahasveros* / ByS+Brdt" // "ssp. *ahasveros* / ByS + Brdt." // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827556"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827557"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827558"; "IRAN: / Keredj (1200 m.) / 6.5.1936 / Brandt" // "Cotypus / *L. panagaea* / ssp. *ahasveros* / ByS+Brdt" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827559"; "IRAN: / Keredj (1700 m.) / 6.5.1936 / Brandt" // "Cotypus / *L. panagaea* / ssp. *ahasveros* / ByS+Brdt" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827560"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827561"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827562"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827563"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827564"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827565"; "IRAN: / Keredj (1700 m.) / 10.5.1936 / Brandt" // "Cotypus / *L. panagaea* / ssp. *ahasveros* / ByS+Brdt" // "ssp. *ahasveros* / ByS + Brdt." // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827566"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827567"; "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827568"; "X" // "Iran: / Keredj 1700 m / V.1936 / leg. F. Brandt / coll. Bytinski-Salz" // "Paratypoid" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827569".

**Type locality.** Iran: Tehran, "Keredj 1700 m." [Karaj].

**Current status.** Valid subspecies.

## Subfamily Theclinae Swainson, 1831

### Tribe Eumaeini Doubleday, 1847

#### 100. *syra* Pfeiffer, 1932

**Original combination.** "*Thecla ilicis* Esp. ssp. n. *syra* m." Pfeiffer, 1932 in Osthelder and Pfeiffer 1932, Mitt. Münch. Ent. Ges. 22: 31.

**Current combination.** *Satyrium ilicis syra* (Pfeiffer, 1932).

**Current status.** Junior subjective synonym of nomotypical *Satyrium ilicis* (Esper, 1779).

**Type material.** Syntypes 3♂♂ (ZMH 827570–827572) (Fig. 100). "Syria sept. / amanüs / VI.1922" // "Cotypus / *ilicis* / ssp. *syra* / Pfeiffer" // "ssp. *syra* / Pfeiffer" // "Coll. Bytinski-Salz Coll. / Eing. Nr. 20, 1960 Eing." // "ZMH 827570"; "Syria sept. / Taurus / Marasch / 26.V.28 / L. Osthelder leg. / 900 m" // "Cotypus / *ilicis* / ssp. *syra* / Pfeiffer" // "Coll. Bytinski-Salz Coll. / Eing. Nr. 20, 1960 Eing." // "ZMH 827571"; "Syria sept. / Taurus / Marasch / 26.V.28 / L. Osthelder leg. / 1200 m" // "Cotypus / *ilicis* / ssp. *syra* / Pfeiffer" // "Coll. Bytinski-Salz Coll. / Eing. Nr. 20, 1960 Eing." // "ZMH 827572".

**Type locality.** Turkey: "Syria sept., Taurus, Marasch" [Marash].

#### 101. *brevicaudis* Vorbrot, 1911

**Original combination.** "*Thecla linceus* Esp. (= *spini* Schiff.) *brevicaudis* Püngeler, i.l." Vorbrot, 1911 Die Schmetterlinge der Schweiz. I.: 106.

**Current combination.** *Satyrium spini brevicaudis* (Vorbrot, 1911).

**Current status.** Junior subjective synonym of nomotypical *Satyrium spini* ([Denis & Schiffermüller], 1775).

**Type material.** Syntype 1♀ (ZMH 827574) (Fig. 101). "Zermatt / Rpe an Rhamnus alp.[ina] / myrmecophil mit / *Formica fusca* 6.1908 / ♀ c.l. 28.7.1908 Püng." // "Cotype / v. *brevicaudis* Püng." // "Spini var. *brevicaudis* Püng" // "L.29" // "Katalog Nr. / L 2048" // Sig. G. "Warnecke / Eing. Nr. 5, 1949" // "ZMH 827574".

**Type locality.** Switzerland: "bei Zermatt 1700 m".

**Remarks.** Vorbrot (1911) proposed this name as a form (in the original description and "var." on the specimen labels) of "*T. Linceus*" (sic, recte: *lynceus*) (Esper, 1779). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term "form" or "var".

## Unpublished, unavailable names

#### 102. v. *romana* Hartig

**Original combination.** *Lycaena cyllarus* v. *romana* Hartig.

**Current status.** "in litteris" name and hence not available.

**Original material.** Labelled as “Cotype” 3♂♂ (ZMH 833472–833474) (Fig. 102). “romana Hartig” // Lazio / Formia / 23 4 [19]38 / Querci” // [blank label] // “ZMH 833472”; “romana Hartig” // Lazio / Formia / 8 4 [19]38 / Querci” // [blank label] // “ZMH 833473”; “romana Hartig” // Lazio / Formia / 3 5 [19]38 / Querci” // [blank label] // “ZMH 833474”.

**Original locality.** Italy: Lazio.

**Remarks.** This taxon cannot be found in the literature. However, it may refer to *Glaucopsyche alexis latina* Hartig, 1940 (Mem. Soc. Ent. Ital. 18: 187; Type locality: Formia, Latina, Italy). The label data matches the type locality of *latina*. *Papilio cyllarus* Rottemburg, 1775 is a junior subjective synonym of *Papilio alexis* Poda, 1761.

### 103. ab. albipunctata Hartig

**Original combination.** *Lysandra coridon* ab. *albipunctata* Hartig.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 4♂♂ (ZMH 833475–833478) (Fig. 103). “Typen” // “19/7 1917 / Göttingen / Hohefeld” // “ZMH 833475”; “13/7 1917 / Göttingen / Hohefeld” // “ZMH 833476”; “18/8 1917 / Göttingen / Hohefeld” // “ZMH 833477”; “18/7 1917 / Göttingen / Hohefeld” // “ZMH 833478”.

**Original locality.** Germany: Göttingen.

**Remarks.** This taxon cannot be found in the literature. As stated by articles 45.6.1 and 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

## Family Nymphalidae Rafinesque, 1815

### Subfamily Danainae Boisduval, 1833

### 104. *icensis* Fuchs, 1954

**Original combination.** “*Danaus gilippus* var. *icensis*” Fuchs, 1954 in Titschak, Beit. zur Fauna Perus 4: 84.

**Current combination.** *Danaus gilippus* *icensis* (Fuchs, 1954).

**Current status.** Junior subjective synonym of *Danaus eresimus erginus* (Godman & Salvin, 1897).

**Type material.** Lectotype 1♂ (ZMH 827645), paralectotypes 2♂♂ (ZMH 827643–827644) (Fig. 104). “Huayuri / 5/1940 / Type” / “Coll. H. Rödinger / Eing. Nr. 30, 1952 / Katalog Nr. L” // “ZMH 827643”; “Ica / 7/1940 / Type” / “Coll. H. Rödinger / Eing. Nr. 30, 1952 / Katalog Nr. L” // “Paralectotype ♀ / *Danaus gilippus* / var. *icensis* / von Fuchs / G. Lamas ‘98” // “*Danaus eresimus* / *erginus* Godman + / Salvin ♀ / G. Lamas. Det. 1978” // “ZMH 827644”; “114 / *eresimus*. ab / Ica (Perú)” // “Ica / 7.1928 / Type” // “Coll. H. Rödinger / Eing. Nr. 30, 1952 / Katalog Nr. L” // “Lectotype ♂ / *Danaus gilippus* / var. *icensis* / von Fuchs / G. Lamas ‘78” // “*Danaus eresimus* / *erginus* Godman + / Salvin ♂ / G. Lamas. Det. 1978” // “ZMH 827645”.

**Type locality.** Peru: “Im Tal von Ica und des Río Grande”.

**Remarks.** Fuchs (1954) proposed this name as a “var.” of *Danais gilippus* Cramer, 1775. According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term “var.”.

### 105. *roedingeri* Fuchs, 1954

**Original combination.** “*Danais gilippus* var. *Rödingeri*” Fuchs, 1954 in Titschak, Beit. zur Fauna Perus 4: 84.

**Current combination.** *Danaus gilippus* *roedingeri* (Fuchs, 1954).

**Current status.** Junior subjective synonym of *D. g. candidus* Clark, 1941.

**Type material.** Holotype 1♂ (ZMH 827652), paratypes 6♂♀ (ZMH 827649–827651, ZMH 827653–827655) (Fig. 105). “*Danais* / *gilippus* / var. *roedingeri* ♂ / v. Fuchs” // “Type” // “Sammlung / W. v. Fuchs / Eing. Nr. 4, 1956” // “Süd – Peru / Ayacucho – Yucae / 2500 m 26. 4. 1936.” // “Holotype ♂ / *Danais gilippus* / var. *Rödingeri* / von Fuchs” // “*Danais gilippus* ♂ / *candidus* Clark / G. Lamas. det. 1978” // “Hbg. – Süd – Peru / Sammelreise 1936. / Eing. Nr. 1, 1937.” // “ZMH 827652”; “Ayacucho / 2–3000 m / 8/1920 / Type” // “*D. roedingeri* ♀” // “Coll. H. Rödinger / Eing. Nr. 30, 1952” // “ZMH 827649”; “Type” // “*Danais gilippus* / var. *roedingeri* ♂ / v. Fuchs / Rio Jucaes b/ / Ayacucho / 1800–2300” // “Summlung / W. v. Fuchs / Eing. Nr. 4, 1956” // “ZMH 827650”; “Ayacucho / 2–3000 m / 8/1920 / Type” // “Coll. H. Rödinger / Eing. Nr. 30, 1952 / Katalog Nr. L” // “ZMH 827651”; “Ayacucho 28.4” // “Süd – Peru / Oberh. Ayacucho / 29.4.1936.” // “Ayacucho / 2–3000 m / 8/1920 / Type” // “Summlung / W. v. Fuchs / Eing. Nr. 4, 1956” // “Hbg. – Süd – Peru / Sammelreise 1936. / Eing. Nr. 1, 1937.” // “ZMH 827653”; “*Danais* / *gilippus* / var. *roedingeri* ♀ / v. Fuchs” // “Type” // “Sammlung / W. v. Fuchs / Eing. Nr. 4, 1956” // “Süd – Peru / Ayacucho – Yucae / 2500 m 26. 4. 1936.” // “Hbg. – Süd – Peru / Sammelreise 1936. / Eing. Nr. 1, 1937.” // “*Danais gilippus* ♀ / *candidus* Clark / G. Lamas. det. 1978” // “Paratype / *Danaus gilippus* ♀ / var. *Rödingeri* / von Fuchs” // “ZMH 827654”; “Type” // “*Danais* / *gilippus* / var. *roedingeri* ♀ / v. Fuchs / Rio Jucaes / 6 / Ayacucho / 1800–2300” // “ZMH 827655”.

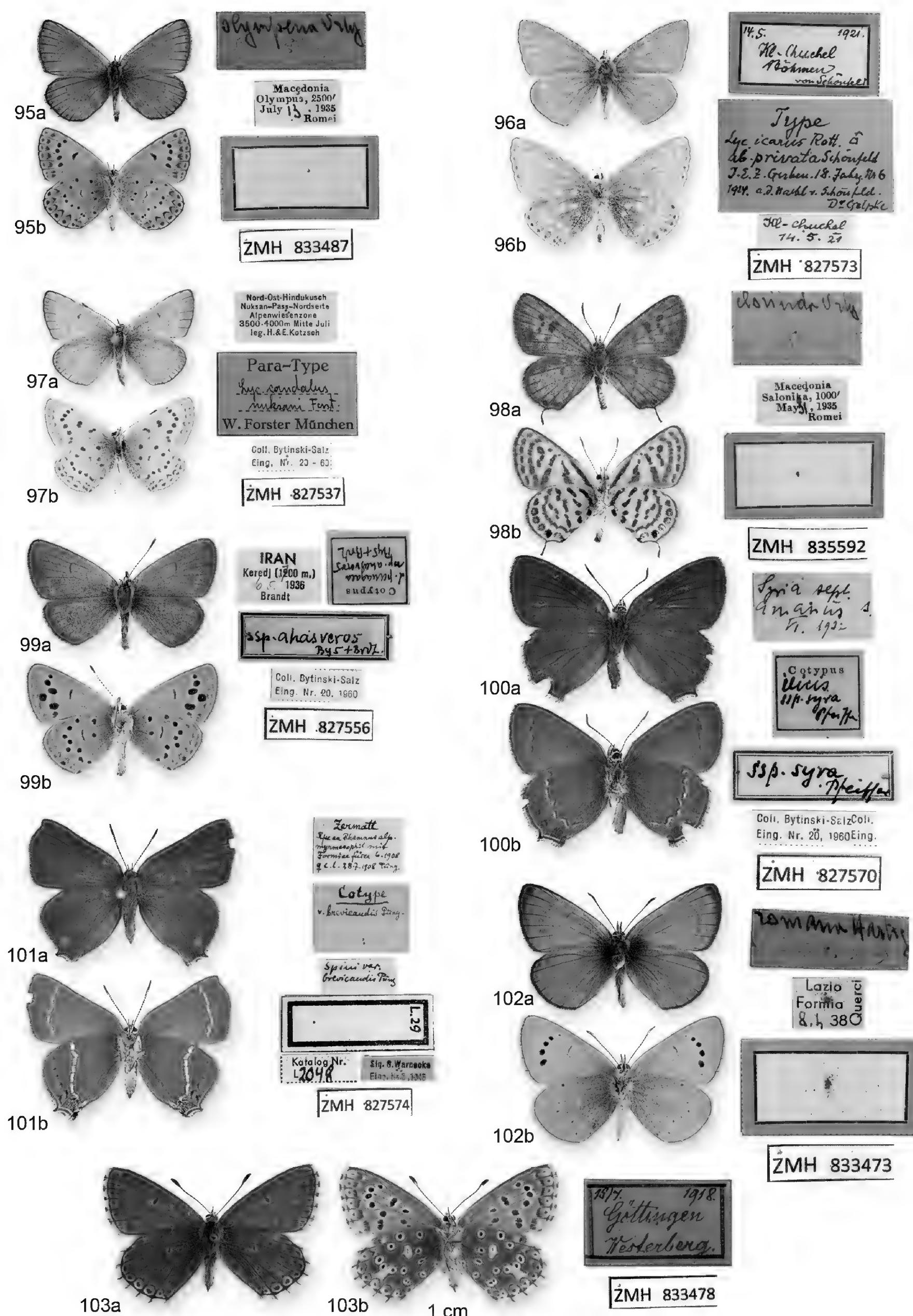
**Type locality.** Peru: “... näheren Umgebung von Ayacucho, auf 2000–2600 m” [vicinity of Ayacucho, 2000–2600 m].

**Remarks.** Fuchs (1954) proposed this name as a “var.” of *Danais gilippus* (Cramer, 1775). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term “var.”.

## Subfamily Heliconiinae Swainson, 1822

### 106. *altonevadensis* Reisser, 1927

**Original combination.** “*Argynnis niobe* var. nov. *altonevadensis*” Reisser, 1927 Int. Ent. Z. Guben 20: 373.



**Plate 14.** **95.** *Polyommatus escheri olympena* (Verity, 1936); **96.** *Polyommatus icarus* ab. *privata* (Schönfeld, 1924); **97.** *Polyommatus (Sublysandra) nuksani* (Forster, 1937); **98.** *Tarucus balkanica* ab. *clorinda* Verity, 1938; **99.** *Turanana panagaea ahasveros* (Bytinski-Salz & Brandt, 1937); **100.** *Satyrium ilicis syra* (Pfeiffer, 1932); **101.** *Satyrium spini brevicaudis* (Vorbrodt, 1911); **102.** *Lycaena cyllarus* v. *romana* Hartig; **103.** *Lysandra coridon* ab. *albipunctata* Hartig. **a.** Dorsal view, **b.** ventral view.

**Current combination.** *Fabriciana niobe altonevadensis* (Reisser, 1927).

**Current status.** Junior subjective synonym of *Fabriciana niobe niobe* (Linnaeus, 1758).

**Type material.** Syntypes 1 ♂ 1 ♀ (ZMH 827656–827657) (Fig. 106). “Type # 7 ♂ / *Argynnis niobe* var. / *altonevadensis* Reisser / Int. Ent. Z. guben / Summer 1927” // “HISPANIA VII 26 / SIERRA NEVADA / O BUBACEK” // [blank label] // “ZMH 827656”; “Type # 4 ♀ / *Argynnis niobe* var. / *altonevadensis* Reisser / Int. Ent. Z. guben / Summer 1927” // “HISPANIA VII 26 / SIERRA NEVADA / O BUBACEK” // [blank label] // “ZMH 827657”.

**Type locality.** Spain: “... auf den Höhen der Sierra Nevada in Südspanien ...”. [higher areas of Sierra Nevada in southern Spain].

**Remarks.** Reisser (1927) proposed this name as a “var.” of *Argynnia niobe* (Linnaeus, 1758). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term “var.”.

## 107. *cyrnea* Schawerda, 1926

**Original combination.** “*Argynnis pandora* Schiff. var. nov. *cyrnea*” Schawerda, 1926 Z. Öst. Ent. Ver. 11: 109.

**Current combination.** *Argynnis pandora cyrnea* Schawerda, 1926.

**Current status.** Junior subjective synonym of *Argynnis pandora pandora* ([Denis & Schiffermüller], 1775).

**Type material.** Syntypes 2♂♂ (ZMH 833447–833448) (Fig. 107). “*pandora* / var. *cyrnea* Schawerda / Cotype [illegible]” // “Evisa Corse / Juli 1921 / Col. O. Bubacek” // [blank label] // “ZMH 833447”; “*pandora* / var. *cyrnea* Schawerda / Cotype [illegible]” // “Evisa Corse / Juli 1921 / Col. O. Bubacek” // [blank label] // “ZMH 833448”.

**Type locality.** France: “Korsika” [Corsica].

**Remarks.** Schawerda (1926) proposed this name as a “var.” of *Argynnis pandora* ([Denis & Schiffermüller], 1775). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term “var.”.

## 108. *argentifasciata* Kotzsche, 1937

**Original combination.** “*Argynnis pandora* Schiff. *argentifasciata* ssp. n.” Kotzsche, 1937 Ent. Rdsch. 55: 9.

**Current combination.** *Argynnis pandora argentifasciata* Kotzsche, 1937.

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 827665–827666) (Fig. 108). “West-Hindukusch / Andarab / Geröllzone / 4000–4500 m Mitte August / leg. H.&E. Kotzsche” // “Cotypus / *A. pandora* / ssp. *argenti-* / *fasciata* / Kotzsche” // “ssp. *argentifasciata* / Kotzsche” // “ZMH827665”; “West-Hindukusch / Andarab / Banu-Ebene / 2000–

2500 m August / leg. H.&E. Kotzsche” // “Cotypus / *A. pandora* / ssp. *argenti-* / *fasciata* / Kotzsche” // “ZMH827666”.

**Type locality.** Afghanistan: “Andarab im westlichen Hindukusch”.

## Subfamily Nymphalinae Rafinesque, 1815

### Tribe Melitaeini Newman, 1870

#### 109. f. *urbanoides* Warnecke, 1942

**Original combination.** “*Melitaea maturna* L., ♂, n. f. *urbanoides*.” Warnecke, 1942 Dt. Ent. Z. Iris 56: 103.

**Current combination.** *Euphydryas maturna* f. *urbanoides* (Warnecke, 1942).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 2♂♂ (ZMH 827658–827659) (Fig. 109). “Holstein / Innien, e.l. / 1913 Selzer” // “♂ nf. *urbanoides* / Warn. Type / Iris 1942, 103” // “L.25 / *Melitaea maturna* - / *urbanoides* / Warn.” // “ZMH 827658”; “Holstein / Innien / [illegible]” // “VON / G. WARNECKE / W. LINZ. HAMB.” // “Sig. W. Linz / Eing. 12 – 74” // “ZMH 827658”.

**Original locality.** Germany: “Innien bei Neumünster (Holstein).”; Schleswig-Holstein.

**Remarks.** Warnecke (1942) proposed this name as a “form” of *Melitaea maturna* (Linnaeus, 1761). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. The title already indicates that this form constitutes an individual aberration and thus an unavailable name.

#### 110. *tenuicula* Verity, 1919

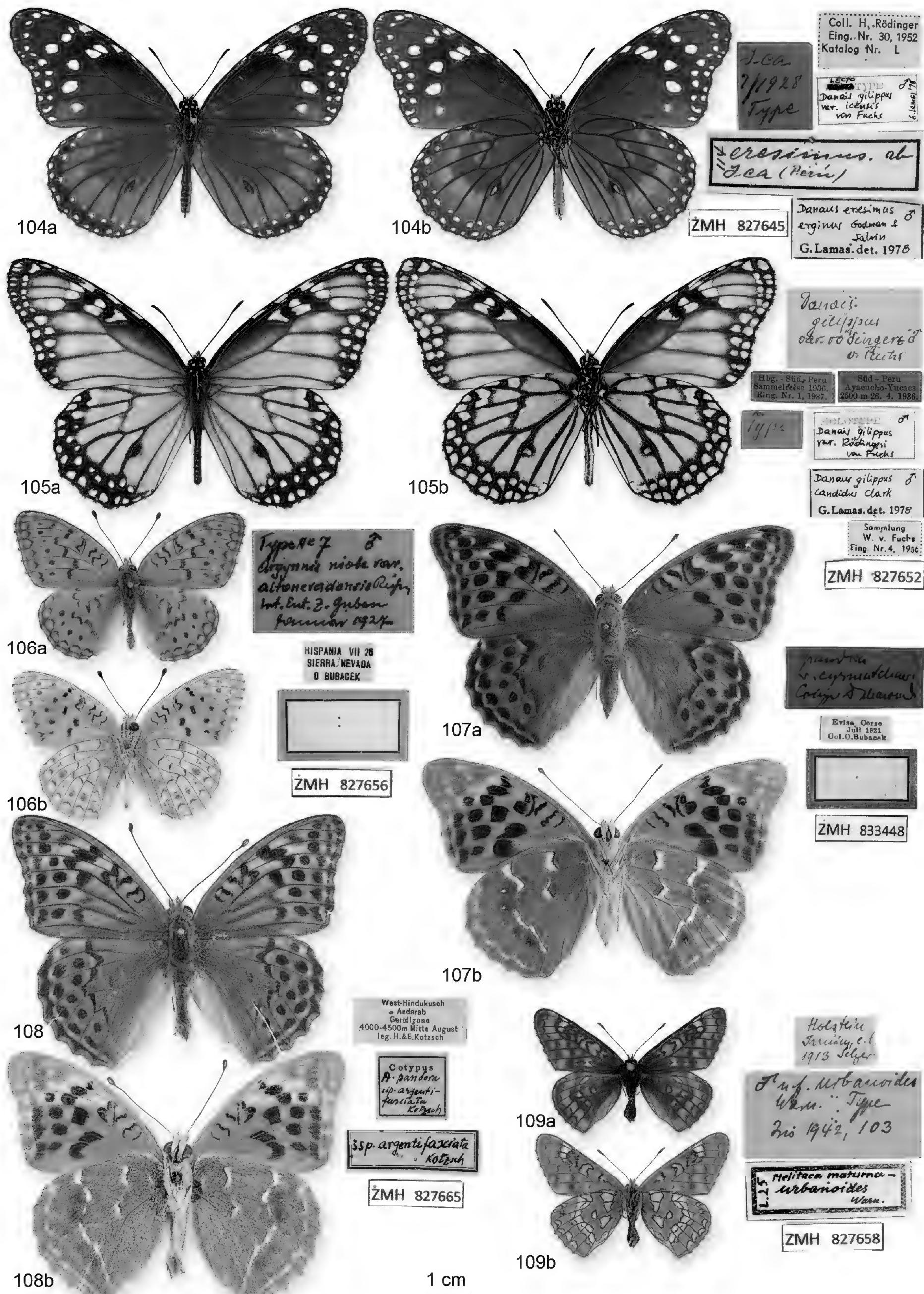
**Original combination.** “*Melitaea athalia* race *tenuicula* mihi” Verity, 1919 Ent. Rec. 31: 193–194.

**Current combination.** *Melitaea athalia tenuicula* Verity, 1919.

**Current status.** Valid subspecies.

**Original material.** Labelled as “Type” 6♂♂ (ZMH 833455–833460) (Fig. 110). “*tenuicula* Vrty” // helvetica Rühl” // “Marche / Bolognola / 28 VI 1937 / Querci.” // [blank label] // “ZMH 833455”; “*tenuicula* Vrty” // helvetica Rühl” // “Marche / Bolognola / 15 VI 1937 / Querci.” // [blank label] // “ZMH 833456”; “*tenuicula* Vrty” // “Marche / Bolognola / 17 VI 1937 / Querci.” // [blank label] // “ZMH 833457”; “*tenuicula* Vrty” // helvetica Rühl” // “Marche / Bolognola / 18 VI 1937 / Querci.” // [blank label] // “ZMH 833458”; “*tenuicula* Vrty” // “Marche / Bolognola / 28 VI 1937 / Querci.” // [blank label] // “ZMH 833459”; “*tenuicula* Vrty” // “Marche / Bolognola / 27 VI 1937 / Querci.” // [blank label] // “ZMH 833460”.

**Original locality.** Italy: “Bolognola in the Sibillini Mountains, 1200 m”.



**Plate 15.** **104.** *Danaus gilippus icensis* (Fuchs, 1954); **105.** *Danaus gilippus roedingeri* (Fuchs, 1954); **106.** *Fabriciana niobe altonevadensis* (Reisser, 1927); **107.** *Argynnis pandora cyrnea* Schawerda, 1926; **108.** *Argynnis pandora argentifasciata* Kotzsch, 1937; **109.** *Euphydryas maturna* f. *urbanoides* (Warnecke, 1942). **a.** Dorsal view, **b.** ventral view.

**Remarks.** Verity (1919) proposed this name as a “race” of *Melitaea athalia* (Rottemburg, 1775). According to Kudrna (1983: 83–84), this name is available as subspecific. The year on the specimen labels (1937) indicate specimens were collected 18 years after description (1919) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these six specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens

### 111. *varissima* Verity, 1914

**Original combination.** “*Melitaea [parthenie Bkh] varia* Meyer-Dür *varissima* nom. nov.” Verity, 1914 (1913) Boll. Soc. Ent. Ital. 45: 210.

**Current combination.** *Melitaea varia varissima* Verity, 1914.

**Current status.** Valid subspecies.

**Original material.** Labelled as “Type” 6♂♂ (ZMH 833461–833466) (Fig. 111). “varissima Vrty” // “varia Meyer-Dür” // “Marche / Bolognola / 25.VI.1937 / Querci” // [blank label] // “ZMH 833461”; “varissima Vrty” // “Marche / Bolognola / 20.VI.1937 / Querci” // [blank label] // “ZMH 833462”; “varissima Vrty” // “Marche / Bolognola / 14.VI.1937 / Querci” // [blank label] // “ZMH 833462”; “varissima Vrty” // “Marche / Bolognola / 14.VI.1937 / Querci” // [blank label] // “ZMH 833463”; “varissima Vrty” // “Marche / Bolognola / 5.VI.1937 / Querci” // [blank label] // “ZMH 833464”; “varissima Vrty” // “Marche / Bolognola / 22.VI.1937 / Querci” // [blank label] // “ZMH 833465”; “varissima Vrty” // “Marche / Bolognola / 25.VI.1937 / Querci” // [blank label] // “ZMH 833466”.

**Original locality.** Italy: Bologna “Nei Faggeti di Bologna, nella località Costarotara e a Piano Astore dei Monti Sibillini, da 1200 a 1600 m. d’altitudine” [Bologna, vicinity of Costarotara and Piano Astore of the Sibillini Mountains, 1200–1600 m.].

**Remarks.** Verity (1919) proposed this name as a “race” of *Melitaea varia* Meyer-Dür, 1851. According to Kudrna (1983: 84), this name is available as subspecific. The year on the specimen labels (1937) indicate specimens were collected 23 years after description (1914) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these six specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens.

### 112. *riloensis* Züllich, 1936

**Original combination.** “*Melitaea cinxia* L. var. *riloensis* Züllich.” Züllich, 1936 Z. Öst. Ent. Ver. 21: 27.

**Current combination.** *Melitaea cinxia riloensis* Züllich, 1936.

**Current status.** Junior subjective synonym of *Melitaea cinxia clarissa* Staudinger.

**Type material.** Syntypes 2♂♂ (ZMH 827646–827647) (Fig. 112). “COTYPE / *Mel. cinxia* L. / ♂ v. *riloensis* / Z. d. Ö. Ent. V. 1936 / DR. ZÜLLICH, WIEN” // “BULGARIEN JUNI 1923 / RYLA GEB. 1200 bis 1800 m / O. BUBACEK WIEN” // [blank label] // “ZMH 827646”; “COTYPE / *Mel. cinxia* L. / ♂ v. *riloensis* / Z. d. Ö. Ent. V. 1936 / DR. ZÜLLICH, WIEN” // “BULGARIEN JUNI 1923 / RYLA GEB. 1200 bis 1800 m / O. BUBACEK WIEN” // [blank label] // “ZMH 827647”.

**Type locality.** Bulgaria: “auf dem Steilhang östlich des Riloklosters in einer Höhe von etwa 1200 m.” [at a steep slope east of the Rilo monastery at an altitude of about 1200 m]. 1901.

**Remarks.** Züllich (1936) proposed this name as a “var.” of *M. cinxia* (Linnaeus, 1758). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term “var.”.

### 113. ab. *mediofasciata* Bubacek, 1926

**Original combination.** “*Melitaea dejone* H.G. ab. *mediofasciata* Bub. ab. nova.” Bubacek, 1926 Verh. Zool.-Bot. Ges. Wien 74–75: (9).

**Current combination.** *Melitaea dejone* ab. *mediofasciata* Bubacek, 1926.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 833454) (Fig. 113). “Type / *Mel. rondoui* / ab. *mediofasciata* / Otto Bubacek” // “France, Gèdre / Hautes Pyrénées / Juli 1923 / Col. Otto Bubacek” // [blank label] // “ZMH 833454”.

**Original locality.** France: Pyrénées.

**Remarks.** Bubacek (1926) proposed this name as an aberration of *M. dejone* Geyer, 1832. As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

### 114. ab. *johni* Stauder, 1922

**Original combination.** “*M. dictynna* ab. *johni*” Stauder, 1922 Ent. Anz. 2: 44.

**Current combination.** *Melitaea diamina* ab. *johni* Stauder, 1922.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827648) (Fig. 114). “Lainau 800 m / [illegible] / 1.VII.17 Schawerda” // “Type” // “*dictynna* f. / johni Stauder” // “Type” // “ZMH 827648”.

**Original locality.** Austria: “Salzkammergut (Lainau-tale, Hallstatt)”.

**Remarks.** Stauder (1922) proposed this name as an aberration of *M. dictynna* Esper, 1778. As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

### 115. *balcanica* Züllich, 1936

**Original combination.** “*Melitaea trivia* Schiff. var. *balcanica* Züllich.” Züllich, 1936 Z. Öst. Ent. Ver. 21: 27.

**Current combination.** *Melitaea trivia balcanica* Züllich, 1936.

**Current status.** Junior subjective synonym of *Melitaea trivia lathon* Fruhstorfer, 1917.

**Type material.** Syntypes 2♂♂ (ZMH 827663–827664) (Fig. 115). “BULGARIEN JUNI 1928 / RYLA GEB. 1200 bis 1800 m / O. BUBACEK” // [blank label] // “COTYPE / *Mel. trivia* / ♂ v. *balcanica* / Z. d. Ö. Ent. V. 1936 / DR. ZÜLLICH, WIEN” // “ZMH 827663”; “BULGARIEN JUNI 1928 / RYLA GEB. 1200 bis 1800 m / O. BUBACEK” // [blank label] // “COTYPE / *Mel. trivia* / ♂ v. *balcanica* / Z. d. Ö. Ent. V. 1936 / DR. ZÜLLICH, WIEN” // “ZMH 827664”.

**Type locality.** Bulgaria: “in den gebirgigen Teilen der zentralen und östlichen Balkanhalbinsel (Krain, Bosnien, Herzegowina etc.)”. [in the mountainous parts of the central and eastern Balkan peninsula].

**Remarks.** Züllich (1936) proposed this name as a variety of *M. trivia* ([Denis & Schiffermüller], 1775). According to article 45.6.4 (ICZN 1999), it is subspecific if first published before 1961 and author expressly used the term “var.”.

### 116. *catapelioides* Stauder, 1918

**Original combination.** “*Melitaea trivia catapelioides* nov. subsp. m.” Stauder, 1918 Zeit. Wiss. Ins. Biol. 14: 57.

**Current combination.** *Melitaea trivia catapelioides* Stauder, 1918.

**Current status.** Junior subjective synonym of nomototypical *Melitaea trivia* ([Denis & Schiffermüller], 1775).

**Original material.** Labelled as “Type” 1♂ (ZMH 827662) (Fig. 116). “Type” // “Luen / Calabria mer. / Aspromonte 950 m. / 6.VII 1920 / H. Stauder legit.” // “*trivia catape - / lioides* Stauder” // “Type” // “Sig. G. Warnecke / Eing. Nr. 5, 1945” // “ZMH 827662”.

**Original locality.** Italy: “Unteritalien (Kalabrien)”.

**Remarks.** The year on the specimen label (1920) indicates specimen was collected two years after

description (1918) from the same location (i.e., Italy, Kalabrien) the original holotype material was collected. As a result, the label of the specimen treated as “Type” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, this specimen is erroneously labelled as type, should be annotated as “Not a Type” and is treated here as “Non-type” specimen.

### 117. *ignasiti* de Sagarra, 1926

**Original combination.** “*Melitaea trivia* Schiff., rassa *ignasiti*, nova rassa” de Sagarra, 1926 Butl. Inst. Catal. Hist. Nat. (2)6: 131.

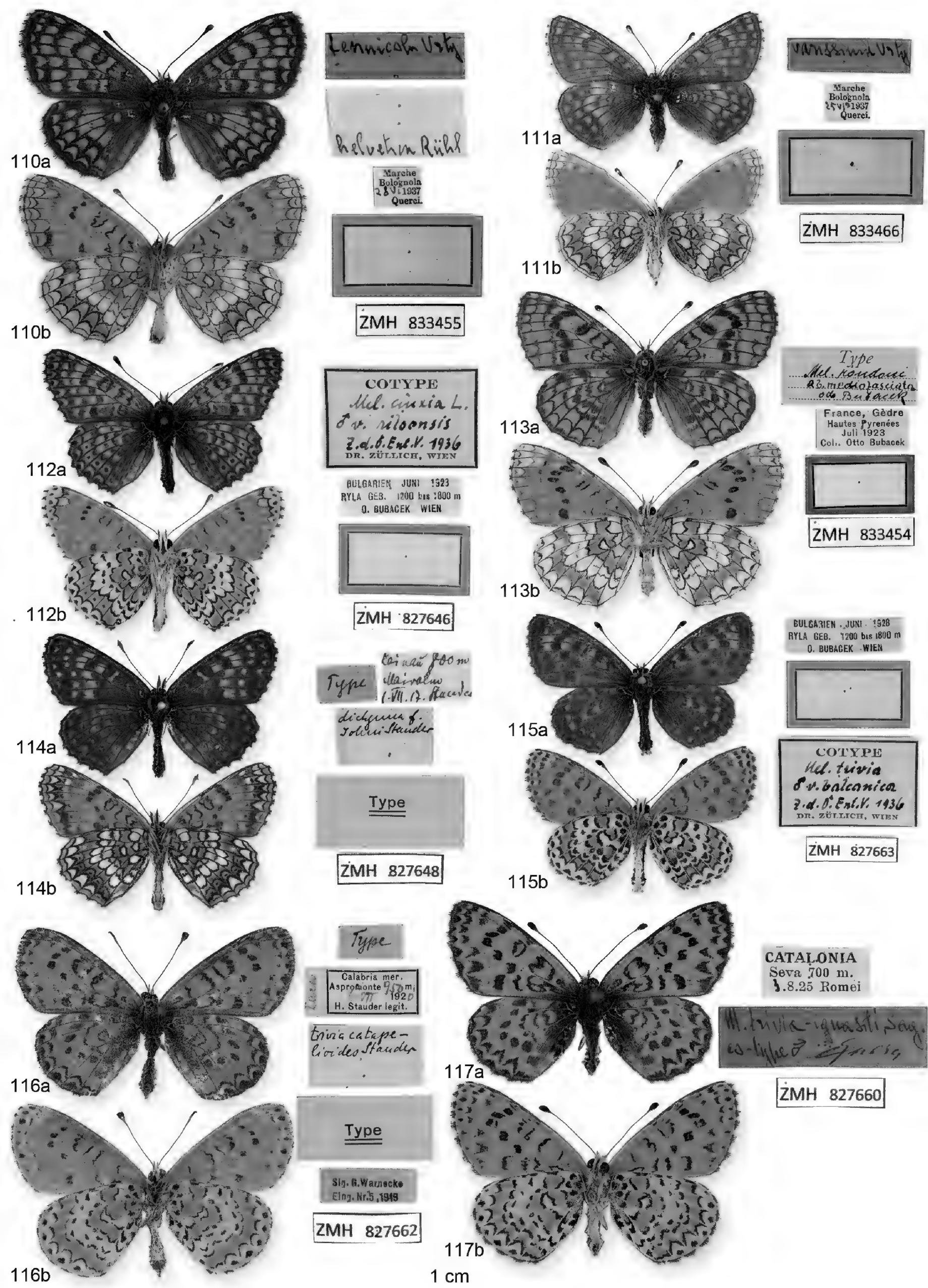
**Current combination.** *Melitaea trivia ignasiti* de Sagarra, 1926.

**Current status.** Valid subspecies.

**Type material.** Paralectotypes 1♂1♀ (ZMH 827660–827661) (Fig. 117). “CATALONIA / Seva 700 m. / 3.8.25 Romei” // “*M. trivia – ignasiti* Sag. / co-type ♂ Querci” // “ZMH 827660”; “CATALONIA / Seva 700 m. / 3.8.25 Romei” // “Sammlung / R. Jähnig / Eing. Nr. 29, 1949” // “*M. trivia – ignasiti* Sag. / co-type ♀ Querci” // “L.28” // “ZMH 827661”.

**Type locality.** Spain: Catalonia, “Martorell”.

**Remarks.** de Sagarra (1926) proposed this name as a “rassa = race” of *M. trivia* ([Denis & Schiffermüller], 1775). The term “rassa = race” which was employed by de Sagarra in 1926 was often used in the current sense of subspecies. As a result, the first line of article 45.6 (ICZN 1999) – the rank denoted by a species-group name following a binomen is subspecific – is applied here, it is thus available as subspecific. Higgins (1941) synonymised it with *M. trivia pseudodidyma* Rebel, 1905 but he reconsidered it as a valid subspecies in his subsequent books. García-Barros et al. (2013) made a comment in Fauna Ibérica that “the orange color of the Iberian specimens is lighter than those from other European areas; those have been attributed to subspecies “*ignasiti* de Sagarra, 1926”, which, however, does not seem significantly different. Furthermore, it does not seem significantly differentiated from a genetic point of view (Wahlberg pers. comm.).” The taxon *ignasiti* was reinstated as a valid species by van Oorschot and Coutsis (2014), and this was accepted by Macia et al. (2015) who designated lectotype and paralectotypes. Therefore, specimens at ZMH are by default paralectotypes. However, most other recent authors (e.g., Kudrna 2019) treat this taxon as a synonym to *M. trivia*, because there is no evidence for species status. Even Oorschot and Coutsis (2014) mention intermediates indicating hybridisation. It should be noted that the species name is not mentioned in the latest European checklist (Wiemers et al. 2018).



**Plate 16.** **110.** *Melitaea athalia tenuicula* Verity, 1919; **111.** *Melitaea varia varissima* Verity, 1914; **112.** *Melitaea cinxia riloensis* Züllich, 1936; **113.** *Melitaea deione* ab. *mediofasciata* Bubacek, 1926; **114.** *Melitaea diamina* ab. *johni* Stauder, 1922; **115.** *Melitaea trivia balcanica* Züllich, 1936; **116.** *Melitaea trivia catapelioides* Stauder, 1918; **117.** *Melitaea trivia ignasiti* de Sagarra, 1926. **a.** Dorsal view, **b.** ventral view.

**Tribe Nymphalini Rafinesque, 1815****118. *guhni* Tschauner, 1926**

**Original combination.** “*Vanessa urticae* var. *guhni*” Tschauner, 1926 Int. Ent. Z. 20: 229, 273.

**Current combination.** *Aglais urticae guhni* (Tschäuner, 1926).

**Current status.** Junior subjective synonym of *Aglais urticae urticae* (Linnaeus, 1758).

**Type material.** Paratype 1♂ (ZMH 827667) (Fig. 118). “Paratypoid” // “*Vanessa urticae* / nov. var. *guhni* / Paratype e. coll. / Tschäuner, Berlin 1926” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827667”.

**Type locality.** Germany: Berlin.

**Remarks.** This case seems ambiguous, because Tschäuner (1926) writes that the new name constitutes a local variation, if not a new race, although he also notes that he is not sure whether the variation is really heritable. On page 273 he names it again as “*Vanessa urticae* var. *Guhni* nov. spec.” [sic!]. See also the critical remark by Kitt (1927).

**119. f. *clarior* Warnecke, 1959**

**Original combination.** “*Araschnia levana* (Linnaeus) gen. vern. n. f. *clarior*” Warnecke, 1959 Mitt. Faun. Arb. Gem. Schlesw. Holst. 1 (10.): 53.

**Current combination.** *Araschnia levana* f. *clarior* Warnecke, 1959.

**Current status.** Infrasubspecific and thus unavailable name.

**Original material.** Labelled as “Type” 2♂♂ (ZMH 825009–825010) (Fig. 119). “Schleswig / Elsdorfer Sch. / 20.3.97” // “n.f. *clarior* W. / Coll. Warnecke / Eing. Nr. 5-1949” // “ZMH 825009”; “Schleswig / Elsdorfer Sch. / c. l. 20.3.97” // “n.f. *clarior* W. / Coll. Warnecke / Eing. Nr. 5-1949” // “ZMH 825010”.

**Type locality.** Germany: Schleswig-Holstein.

**Remarks.** Warnecke (1959) proposed this name as an aberration of *A. levana* (Linnaeus, 1758). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. From the text of the description it is unambiguously clear that the author is describing an aberration and not a subspecies.

**120. ab. *marginelineata* Horch, 1932**

**Original combination.** “*Araschnia levana* L. gen. aest. *prorsa* ab. *marginelineata*” Horch, 1932 Int. Ent. Z. 26:338.

**Current combination.** *Araschnia levana prorsa* ab. *marginelineata* Horch, 1932.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Kotype” 1♂ (ZMH 825011) (Fig. 120). “f. *marginelineata* / Horch / Gub. I. E Z; 26., 1932/3, / P. 337.” // “Umgeg. v. Hamburg / Radbruch / e. l. 10.7.32 / R. Horch Hamburg” // “Kotype” // “ZMH 825011”.

**Original locality.** “Lüneburger Heide”, Hamburg [Germany].

**Remarks.** Horch (1932) proposed this name as an aberration of *A. levana* (Linnaeus, 1758). This species is known for having two forms, *levana* and *prorsa* that represent the spring and summer broods respectively. As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

**Subfamily Satyrinae Boisduval, 1833****Tribe Satyrini Boisduval, 1833****121. *alphea* Warnecke, 1919**

**Original combination.** “*Satyrus arethusa* Schiff. nov. subsp. *alphea* Warn.” Warnecke, 1919 Int. Ent. Z. 12: 182.

**Current combination.** *Arethusana arethusa alphea* (Warnecke, 1919).

**Current status.** Junior subjective synonym of *Arethusana arethusa arethusa* ([Denis & Schiffermüller], 1775).

**Type material.** Syntype 1♂ (ZMH 827676) (Fig. 121). “Type” // nov. v. *Alphea* / Warn.” // “Type” // “Griechenld.” // “ZMH 827676”.

**Type locality.** Greece: “Griechenland, Velucci und Parnass”.

**122. *asperomontana* Stauder, 1921**

**Original combination.** “*Satyrus circe* L. subsp. n. *asperomontana*” Stauder, 1921 Dt. Ent. Z. Iris 35: 28.

**Current combination.** *Brintesia circe asperomontana* (Stauder, 1921).

**Current status.** Junior subjective synonym of *Brintesia circe circe* (Fabricius, 1775).

**Type material.** Syntype 1♂ (ZMH 827680) (Fig. 122). “1/7 / Calabria mer. / Asperomonte 1200 m. / Polsi 1920 / H. Stauder legit.” // “Type” // “circe / *asperomontana* / Type” // “ZMH 827680”.

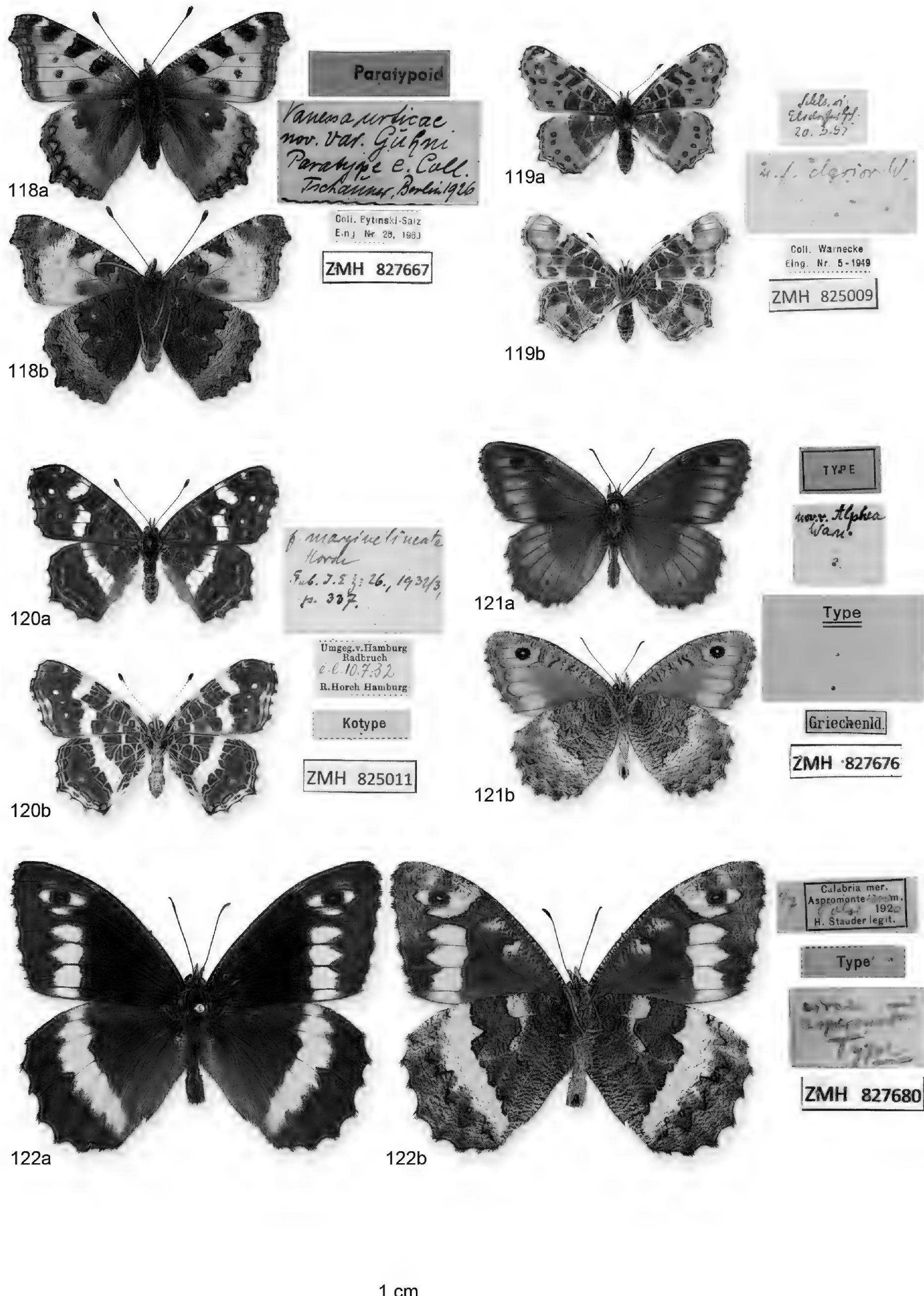
**Type locality.** Italy: “Polsibeken, Aspromonte 1350–1500 m.”

**123. f. *rufobrunnea* Warnecke, 1942**

**Original combination.** “*Coenonympha arcana* L. n. f. *rufobrunnea*” Warnecke, 1942 Dt. Ent. Z. Iris 56: 102.

**Current combination.** *Coenonympha arcana* f. *rufobrunnea* Warnecke, 1942.

**Current status.** Infrasubspecific and hence unavailable name.



**Plate 17.** **118.** *Aglais urticae guhni* (Tschauner, 1926); **119.** *Araschnia levana* f. *clarior* Warnecke, 1959; **120.** *Araschnia levana* *prorsa* ab. *marginelineata* Horch, 1932; **121.** *Arethusana arethusa* *alphea* (Warnecke, 1919); **122.** *Brintesia circe* *asperomontana* (Stauder, 1921). **a.** Dorsal view, **b.** ventral view.

**Original material.** Labelled as “Type” 1♂ (ZMH 827677) (Fig. 123). “Itzehoe / (Holstein)” // “n.f. rufobrunnea Warn. / Type / Iris 1942, p. 102” // “Katalog Nr. 519 / HL” // “Coenon. arcania - / f. rufobrunnea / Warn. / L.38” // “Sig. G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827677”.

**Original locality.** Germany: Schleswig-Holstein, Itzehoe.

**Remarks.** Warnecke (1942) proposed this name as a form of *C. arcania* (Linnaeus, 1761). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. From the text it is clear that the author describes an individual form / aberration.

## 124. *tyrrhena* Stauder, 1915

**Original combination.** “*Coenonympha arcania tyrrhena* m. subsp. nov.” Stauder, 1915 Zeit. Wiss. Ins. Biol. 11: 1, t. 2, f. 17.

**Current combination.** *Coenonympha arcania tyrrhena* Stauder, 1915.

**Current status.** Junior subjective synonym of *Coenonympha arcania arcania* (Linnaeus, 1761).

**Type material.** Syntype 1♂ (ZMH 827761) (Fig. 124). “Type” // “Calabria / Umg. Paola-Co-/Senza 18.6.1920 / H. Stauder” // “Type / v. *tyrrhena* Stauder” // “*arcania* v. / *tyrrhena* Staud.” // “ZMH 827761”.

**Type locality.** Italy: Monte Martinello bei 1000 m. [Castello Cabiaglio, Province of Varese, Italy].

## 125. ab. *energica* Bubacek, 1923

**Original combination.** “*Coenonympha corinna* Hb. ab. *nova energica* Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

**Current combination.** *Coenonympha corinna* ab. *energica* Bubacek, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827740) (Fig. 125). “Type / *Coen. corinna* Hb. / ab. *energica* Bub. / Otto Bubacek Z.B.G. 1922” // “Evisa Corse / Juni 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827740”.

**Original locality.** France: Korsika [Corse].

**Remarks.** Bubacek (1923) proposed this name as an aberration of *C. corinna* (Hübner, 1804). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

## 126. ab. *caeca* Bubacek, 1923

**Original combination.** “*Coenonympha corinna* Hb. ab. *nova caeca* Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

**Current combination.** *Coenonympha corinna* ab. *caeca* Bubacek, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827741) (Fig. 126). “Type / *Coen. corinna* Hb. / ab. *caeca* Bub. / Otto Bubacek Z.B.G. 1922” // “Evisa Corse / Juli 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827741”.

**Original locality.** France: Korsika [Corse].

**Remarks.** Bubacek (1923) proposed this name as an aberration of *C. corinna* (Hübner, 1804). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

## 127. ab. *anophthalmica* Bubacek, 1923

**Original combination.** “*Coenonympha corinna* Hb. ab. *nova anophthalmica* Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

**Current combination.** *Coenonympha corinna* ab. *anophthalmica* Bubacek, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827742) (Fig. 127). “Type / *Coen. corinna* Hb. / ab. *anophthalmica* Bub. / Otto Bubacek Z.B.G. 1922” // “Evisa Corse / Juli 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827742”.

**Original locality.** France: Korsika [Corse].

**Remarks.** Bubacek (1923) proposed this name as an aberration of *C. corinna* (Hübner, 1804). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

## 128. ab. *saturata* Bubacek, 1923

**Original combination.** “*Coenonympha corinna* Hb. ab. *nova saturata* Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

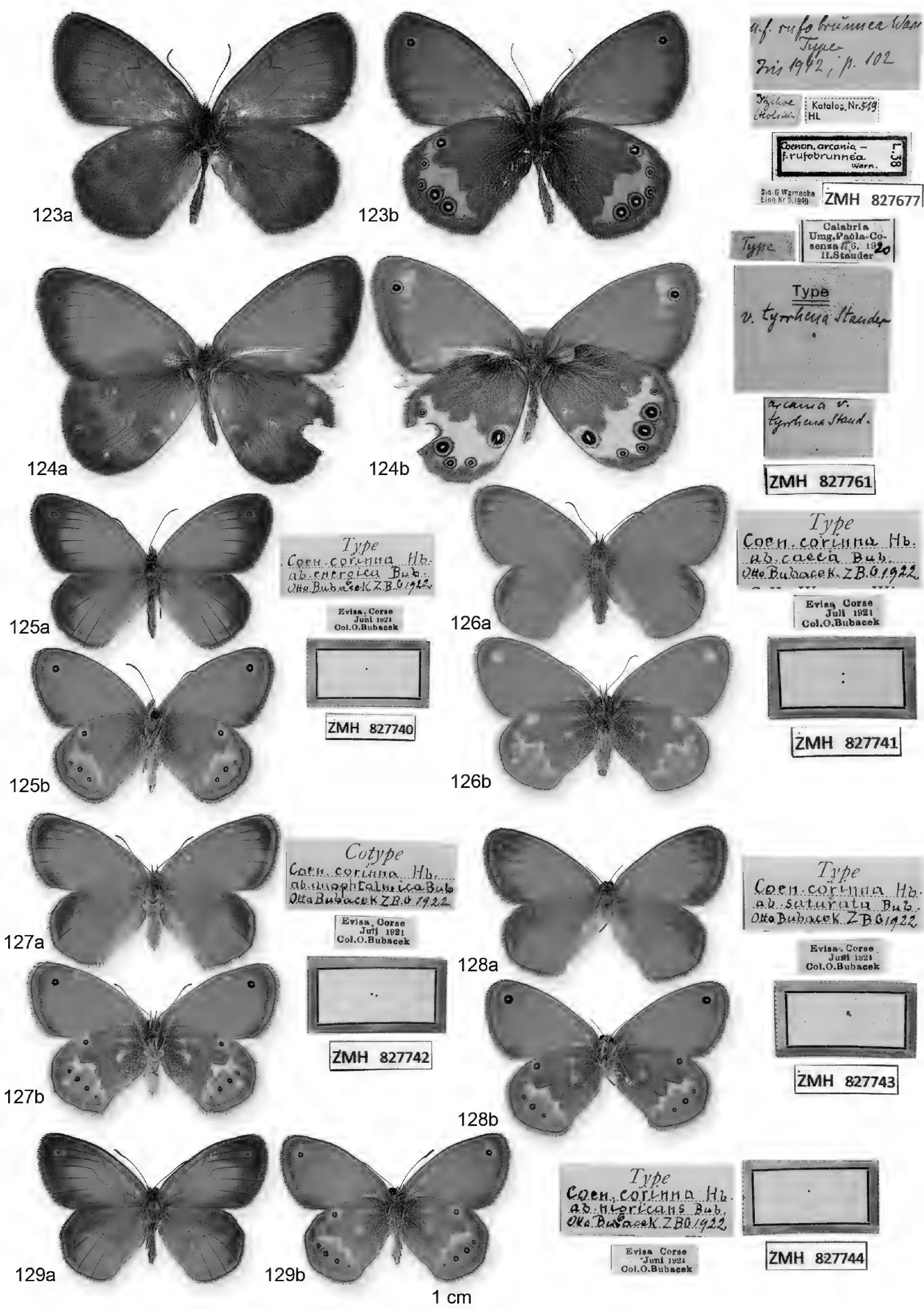
**Current combination.** *Coenonympha corinna* ab. *saturata* Bubacek, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827743) (Fig. 128). “Type / *Coen. corinna* Hb. / ab. *saturata* Bub. / Otto Bubacek Z.B.G. 1922” // “Evisa Corse / Juni 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827743”.

**Original locality.** France: Korsika [Corse].

**Remarks.** Bubacek (1923) proposed this name as an aberration of *C. corinna* (Hübner, 1804). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.



**Plate 18.** **123.** *Coenonympha arcania* f. *rufobrunnea* Warnecke, 1942; **124.** *Coenonympha arcania* *tyrrhena* Stauder, 1915; **125.** *Coenonympha corinna* ab. *energica* Bubacek, 1923; **126.** *Coenonympha corinna* ab. *caeca* Bubacek, 1923; **127.** *Coenonympha corinna* ab. *anophthalmica* Bubacek, 1923; **128.** *Coenonympha corinna* ab. *saturata* Bubacek, 1923; **129.** *Coenonympha corinna* ab. *nigricans* Bubacek, 1923. **a.** Dorsal view, **b.** ventral view.

**129. ab. nigricans Bubacek, 1923**

**Original combination.** “*Coenonympha corinna* Hb. ab. nova nigricans Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

**Current combination.** *Coenonympha corinna* ab. nigricans Bubacek, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827744) (Fig. 129). “Type / *Coen. corinna* Hb. / ab. nigricans Bub. / Otto Bubacek Z.B.G. 1922” // “Evisa Corse / Juni 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827744”.

**Original locality.** France: Korsika [Corse].

**Remarks.** Bubacek (1923) proposed this name as an aberration of *C. corinna* (Hübner, 1804). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

**130. ab. macrophthalmica Bubacek, 1923**

**Original combination.** “*Coenonympha corinna* Hb. ab. nova macrophthalmica Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

**Current combination.** *Coenonympha corinna* ab. macrophthalmica Bubacek, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 2♂♂ (ZMH 827745–827746) (Fig. 130). “Type / *Coen. corinna* Hb. / ab. macrophthalmica Bub. / Otto Bubacek Z.B.G. 1922” // “Evisa Corse / Juli 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827745”; “Type / *Coen. corinna* Hb. / ab. macrophthalmica Bub. / Otto Bubacek Z.B.G. 1922” // “Evisa Corse / Juli 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827746”.

**Original locality.** France: Korsika [Corse].

**Remarks.** Bubacek (1923) proposed this name as an aberration of *C. corinna* (Hübner, 1804). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

**131. ab. gynandra Bubacek, 1923**

**Original combination.** “*Coenonympha corinna* Hb. ab. nova gynandra Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

**Current combination.** *Coenonympha corinna* ab. gynandra Bubacek, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 2♂♂ (ZMH 827747–827748) (Fig. 131). “Type / *Coen. corinna* Hb. / ab. gynandra Bub. / Otto Bubacek Z.B.G. 1922” //

“Evisa Corse / Juni 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827747”; “Type / *Coen. corinna* Hb. / ab. gynandra Bub. / Otto Bubacek Z.B.G. 1922” // “Evisa Corse / Juni 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827748”.

**Original locality.** France: Korsika [Corse].

**Remarks.** Bubacek (1923) proposed this name as an aberration of *C. corinna* (Hübner, 1804). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

**132. f. pulcherrima Warnecke, 1942**

**Original combination.** “*Coenonympha iphis* Schiff., ♀ n.f. pulcherrima.” Warnecke, 1942 Dt. Ent. Z. Iris 56: 102.

**Current combination.** *Coenonympha glycerion* f. pulcherrima Warnecke, 1942.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♀ (ZMH 827738) (Fig. 132). “Mölln i. lotz / 30.6.35 [illegible]” // “30.6.35 / Molln” // “♀ n.f. pulcherrima / Warn. Type / Iris 1942, 102” // “Coll. Warnecke / Eing. Nr. 5, 1949” // “Type” // “ZMH 827738”.

**Original locality.** Germany: “Mölln (Lauenburg)”; Schleswig-Holstein, Herzogtum Lauenburg, Mölln.

**Remarks.** Warnecke (1942) proposed this name as a form of *C. iphis* ([Denis & Schiffermüller], 1775). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. From the text it is clear that the author describes an aberration and not a subspecies.

**133. ab. oikeia Dannehl, 1927**

**Original combination.** “*Coenonympha iphis* Schiff. ab. oikeia Dhl.” Dannehl, 1927 Mitt. Münch. Ent. Ges. 17: 5.

**Current combination.** *Coenonympha glycerion* ab. oikeia Dannehl, 1927.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 835591) (Fig. 133). “25.6” // “Italia central. / Mti. Simbruini / coll. F. Dannehl” // “oikeia / Dhl. / Cotype. / G.” // “Cotype” // “25.6. 1926 / Mti. Simbruini / Mittel. Italien” // “ZMH 835591”.

**Original locality.** Italy: “Mt. Simbruini von etwa 1400 m Höhe”.

**Remarks.** Dannehl (1927) proposed this name as an aberration of *C. iphis* ([Denis & Schiffermüller], 1775). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

### 134. *iranica* Schwingenschuss, 1939

**Original combination.** “*Coenonympha leander* Esp. nov. ssp. *iranica* Sch.” Schwingenschuss, 1939 Ent. Z. 53: 62.

**Current combination.** *Coenonympha leander iranica* Schwingenschuss, 1939.

**Current status.** Valid subspecies.

**Type material.** Syntype 1♂ (ZMH 827714) (Fig. 134). “Pers. Elbursgeb. / Kendevanpass / 2800 m, 3.-8.7.36 / Schwingenschuss” // “Cotypus” // “ssp. *iranica* Schwing.” // “Coll. Bytinski-Salz / Eing. Nr. 20 – 60” // “ZMH 827714”.

**Type locality.** Iran: “Am Kendevan (Sch., W., Pf.) von 2600 m bis 3000 m” [Kandovan pass].

### 135. *rhenana* Grädl, 1933

**Original combination.** “*Coenonympha oedipus* F. sub-species *rhenana*” Grädl, 1933 Int. Ent. Z. 27: 261.

**Current combination.** *Coenonympha oedippus rhenana* Grädl, 1933.

**Current status.** Junior subjective synonym of nomototypical *Coenonympha oedippus* (Fabricius, 1787).

**Type material.** Syntypes 4♂♂ (ZMH 827722–827725) (Fig. 135). “Feldk / Vorarlberg / Prof. F. Grädl / 31.7.32 / Rheinau” // “Subsp. / *rhenana* / F-Grädl” // “Cotypus” // “L.23 / *Coenonympha* / *oedippus* - / *rhenana* Grädl” // “Sig. G. Warnecke / Eing Nr 5, 1949” // “ZMH 827722”; “Vorarlberg / Prof. F. Grädl / Rheinauen / 12.7.27” // “Subsp. / *rhenana* / F-Grädl” // “Cotypus” // “ZMH 827723”; “Vorarlberg / Prof. F. Grädl / Feldkirch. Rhein / auen. 12.7.31” // “Subsp. / *rhenana* / F-Grädl” // “Cotypus” // “Sammlung / G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827724”; “Vorarlberg / Prof. F. Grädl / Feldk-Rheinau / 28.7.32” // “Subsp. / *rhenana* / F-Grädl” // “Co-Type” // “Type” // “ZMH 827725”.

**Type locality.** Germany: “in den Niederungen des Rheintales”. [in the lower region of the Rhine valley].

### 136. *galvagnii* Stauder, 1923

**Original combination.** “*C. p. galvagnii* m. nova sub-spec. (partim aberr.)” Stauder, 1923 Zeit. Wiss. Ins. Biol. 18: 59, t. 3, f. 6–13.

**Current combination.** *Coenonympha pamphilus galvagnii* Stauder, 1923.

**Current status.** Junior subjective synonym of nomototypical *Coenonympha pamphilus* (Linnaeus, 1758).

**Type material.** Syntype 1♂ (ZMH 827739) (Fig. 136). “Type” / “H. Stauder / Litorale austr. / Triest Umgbg. / 12/8/1913” // “*pamphilus* / *galvagnii* Staud.” // “Type” // “Coll. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827739”.

**Type locality.** Italy: Bologna “Bei Grado auf den Lagunen in der g. v. und sonst im Küstengebiete, bei Triest, Görz.” [Bologna, vicinity of Costarotara and Piano Astore of the Sibillini Mountains, 1200–1600].

### 137. f. *maculata* Warnecke, 1942

**Original combination.** “*Coenonympha tphon* Rott., ♀, n. f. *maculata*.” Warnecke, 1942 Dt. Ent. Z. Iris 56: 103.

**Current combination.** *Coenonympha tullia* f. *maculata* Warnecke, 1942.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 2♀♀ (ZMH 827762–827763) (Fig. 137). “Bahrenfeld / 1913” // “♀ n.f. *maculata* / Warn. Cotype / Iris 1942, 103” // “Coll. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827762”; “Segeberg / Juli 13” // “Coll. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827763”.

**Original locality.** Unclear; Germany: Bahrenfeld, Hamburg “aus Holstein.”; publication states: Holstein, label of cotype specimen from Warnecke states Bahrenfeld, ?, (one further specimen without type label: Segeberg)

**Remarks.** Warnecke (1942) proposed this name as a form of *C. tphon* (Rottemburg, 1775). According to article 45.6.1 (ICZN 1999), it is infrasubspecific if the content of the work unambiguously reveals that the name was proposed for an infrasubspecific entity, and is hence unavailable. From the text and already from the title of the paper it is clear that the author describes an aberration. *Papilio tphon* Rottemburg, 1775 is junior subjective synonym of *Coenonympha tullia* (Müller, 1764).

### 138. *flavofasciata* Heyne, 1895

**Original combination.** “*Erebia flavofasciata* Heyne.” Heyne, [1895]; in Rühl & Heyne, Die Pal. Gross-Schmett. 1: 805.

**Current combination.** *Erebia flavofasciata* Heyne, 1895.

**Current status.** Valid species.

**Type material.** Paratype 1♂ (ZMH 833469) (Fig. 138). “Campolungo / Pass / Oberst v. Nolte” // “*Flavofasciata*” // “Type oder Paratype / e coll. von Nolte / s. Heyne-Rühl, 1895, 805, / der keine Samml. hatte. / von Fuchs-Hbg ded.” // “ZMH 833469”.

**Type locality.** Italy: Tessin, Campolungo pass close to Fusio.

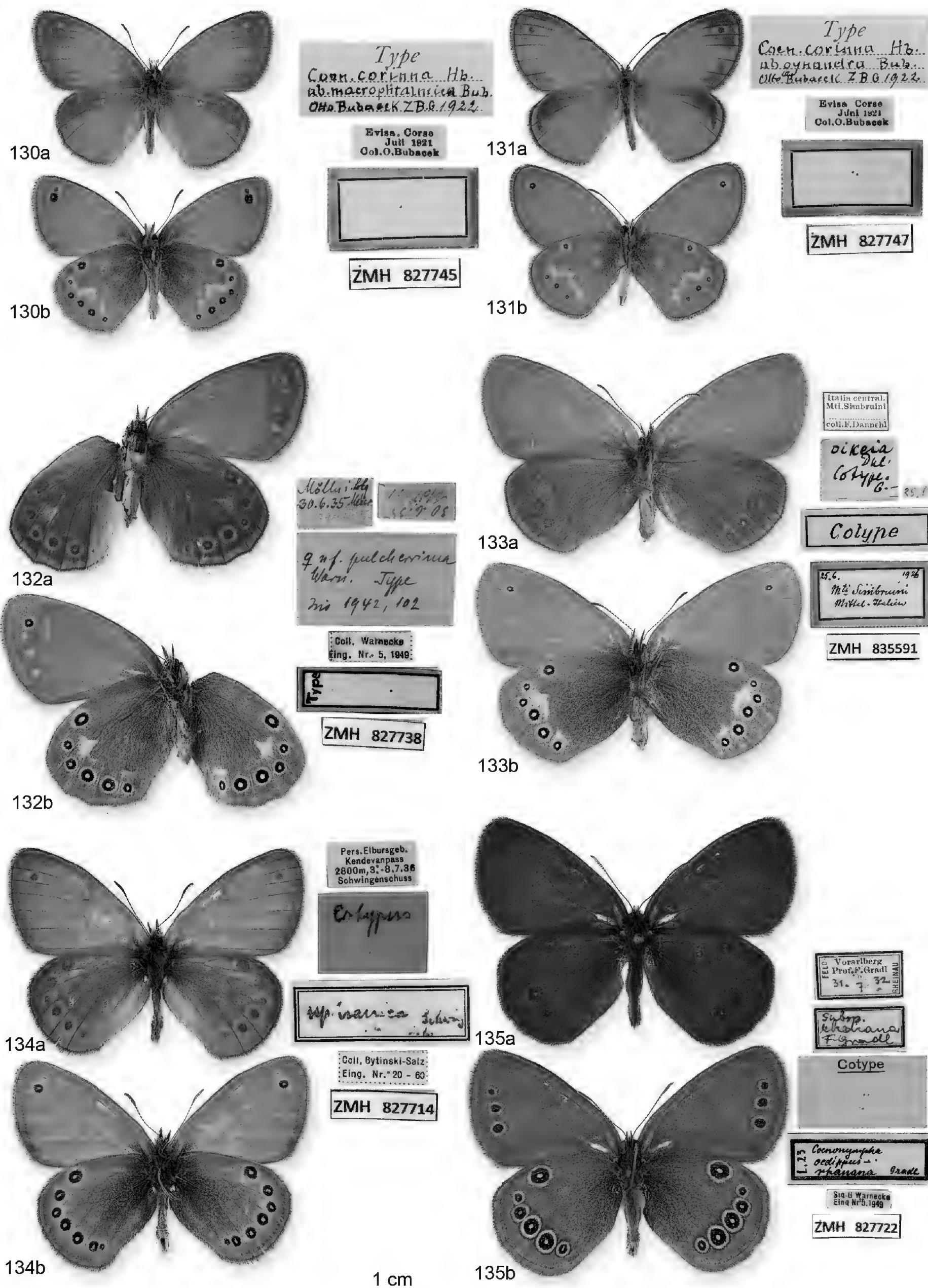
### 139. *peneplana* Berger, 1936

**Original combination.** “*Erebia aethiops* ESPER, race *peneplana*, nov. race” Berger, 1936 Lambillionea 36: 199.

**Current combination.** *Erebia aethiops* *peneplana* Berger, 1936.

**Current status.** Valid subspecies.

**Type material.** Paratypes 3♂♂ (ZMH 835588–835590) (Fig. 139). “PARATYPE / Collection / Luc. Berger” // “Tellin. (R.d. Boyes) / BELGIQUE / 5/8/1936 / Coll. Luc. BERGER.” // [blank label] // “ZMH835588”; “PARATYPE / Collection / Luc. Berger” // “Tellin. (R.d. Boyes) / BELGIQUE / 5/8/1936 / Coll. Luc. BERGER.”



**Plate 19.** 130. *Coenonympha corinna* ab. *macrophthalmica* Bubacek, 1923; 131. *Coenonympha corinna* ab. *gynandra* Bubacek, 1923; 132. *Coenonympha glycerion* f. *pulcherrima* Warnecke, 1942; 133. *Coenonympha glycerion* ab. *oikeia* Dannehl, 1927; 134. *Coenonympha leander iranica* Schwingenschuss, 1939; 135. *Coenonympha oedippus rhenana* Grädl, 1933. **a.** Dorsal view, **b.** ventral view.

// [blank label] // "ZMH835589"; "PARATYPE / Collection / Luc. Berger" // "Tellin. (R.d. Boyes) / BELGIQUE / 16/8/1934 / Coll. Luc. BERGER." // [blank label] // "ZMH835590".

**Type locality.** Belgium: "env. de Han-sur-Lesse".

#### 140. *clorinda* Hartig, 1940

**Original combination.** "*Erebia epiphron* Fn. ssp. *clorinda* n." Hartig, 1940 Mem. Soc. Ent. Ital. 18: 186.

**Current combination.** *Erebia epiphron clorinda* Hartig, 1940.

**Current status.** Junior subjective synonym of *Erebia epiphron amplevittata* Verity, 1921.

**Type material.** Paratypes 1♂1♀ (ZMH 827718–827719) (Fig. 140). "Paratypus ♀ / Er. epiph. / clorinda / Hartig" // "1700 m / Marche / Bolognola / 20.VI 1937 / Querci" // [blank label] // "ZMH 827718"; "Paratypus ♀ / Er. epiph. / clorinda / Hartig" // "1700 m / Marche / Bolognola / 20.VI 1937 / Querci" // [blank label] // "ZMH 827718"; "Paratypus ♂ / Er. epiph. / clorinda Hartig" // "1700 m / Marche / Bolognola / 20.VI 1937 / Querci" // [blank label] // "ZMH 827719".

**Type locality.** Italy: "Bolognola".

#### 141. *vogesiaca* Goltz, 1914

**Original combination.** "*Erebia epiphron vogesiaca*" Goltz, 1914 Dt. Ent. Z. Iris 28:107–109.

**Current combination.** *Erebia epiphron vogesiaca* Goltz, 1914.

**Current status.** Junior subjective synonym of *Erebia epiphron mackeri* Fuchs, 1914.

**Type material.** Syntype 1♂ (ZMH 827679) (Fig. 141). "COTYPE / vogesiaca / v.d.Goltz" // "VII 1913 / Fauxkopf / Vogesen" // "Fauxkopf / Juli 1913 / Kesenheimer" // "ZMH 827679".

**Type locality.** France: "Vogesen".

#### 142. *leonhardi* Fruhstorfer, 1918

**Original combination.** "*Erebia melas leonhardi* sub-spec. *nova*" Fruhstorfer, 1918 Arch. Naturgesch. 84 A7: 131.

**Current combination.** *Erebia melas leonhardi* Fruhstorfer, 1918.

**Current status.** Valid subspecies.

**Type material.** Syntypes 11♂♀ (ZMH 827727–827737) (Fig. 142). "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827727"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827728"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20 - 60" // "ZMH 827729"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20 - 60" // "ZMH

827730"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827731"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20 - 60" // "ZMH 827732"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827733"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20 - 60" // "ZMH 827734"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827735"; "Velebit, Ostaria" // "Cotype" // "Cotypus" // "Coll. Bytinski-Salz / Eing. Nr. 20 - 60" // "ZMH 827736"; "Velebit, Ostaria" // "Cotypus" // "melas leonhardi" Cotype / Velebit Ostria 19[...] // "Coll. Bytinski-Salz / Eing. Nr. 20, 1960" // "ZMH 827737".

**Type locality.** Croatia: "Velebit, Ostaria".

#### 143. *paradisi* Dannehl, 1929

**Original combination.** "*Erebia stygne* O. *paradisi* Dhl." Dannehl, 1929 Mitt. Münch. Ent. Ges. 19: 98.

**Current combination.** *Erebia meolans paradisi* Dannehl, 1929.

**Current status.** Junior subjective synonym of nomotypical *Erebia meolans* (de Prunner, 1798).

**Type material.** Syntypes 3♂♂ (ZMH 835585–835587) (Fig. 143). "19.6" / "Apenn. merid. / Mt. Paradiso / 1500–2000 m / coll. F. Dannehl" // "19.6. 1928 / Mte. Paradiso / Central – Apenninen" // "ZMH 835585"; "22.6" / "Apenn. merid. / Mt. Paradiso / 1500–2000 m / coll. F. Dannehl" // "20.6. 1928 / Mte. Paradiso / Central – Apenninen" // "ZMH 835586"; "19.6" / "Apenn. merid. / Mt. Paradiso / 1500–2000 m / coll. F. Dannehl" // "19.6. 1928 / Mte. Paradiso / Central – Apenninen" // "ZMH 835587".

**Type locality.** Italy: "Monte Paradiso 1600–1900 m, Monte Rotella, Montagna Grande 1800–2100 m (südl. Abruzzen)".

#### 144. *benacensis* Warren, 1933

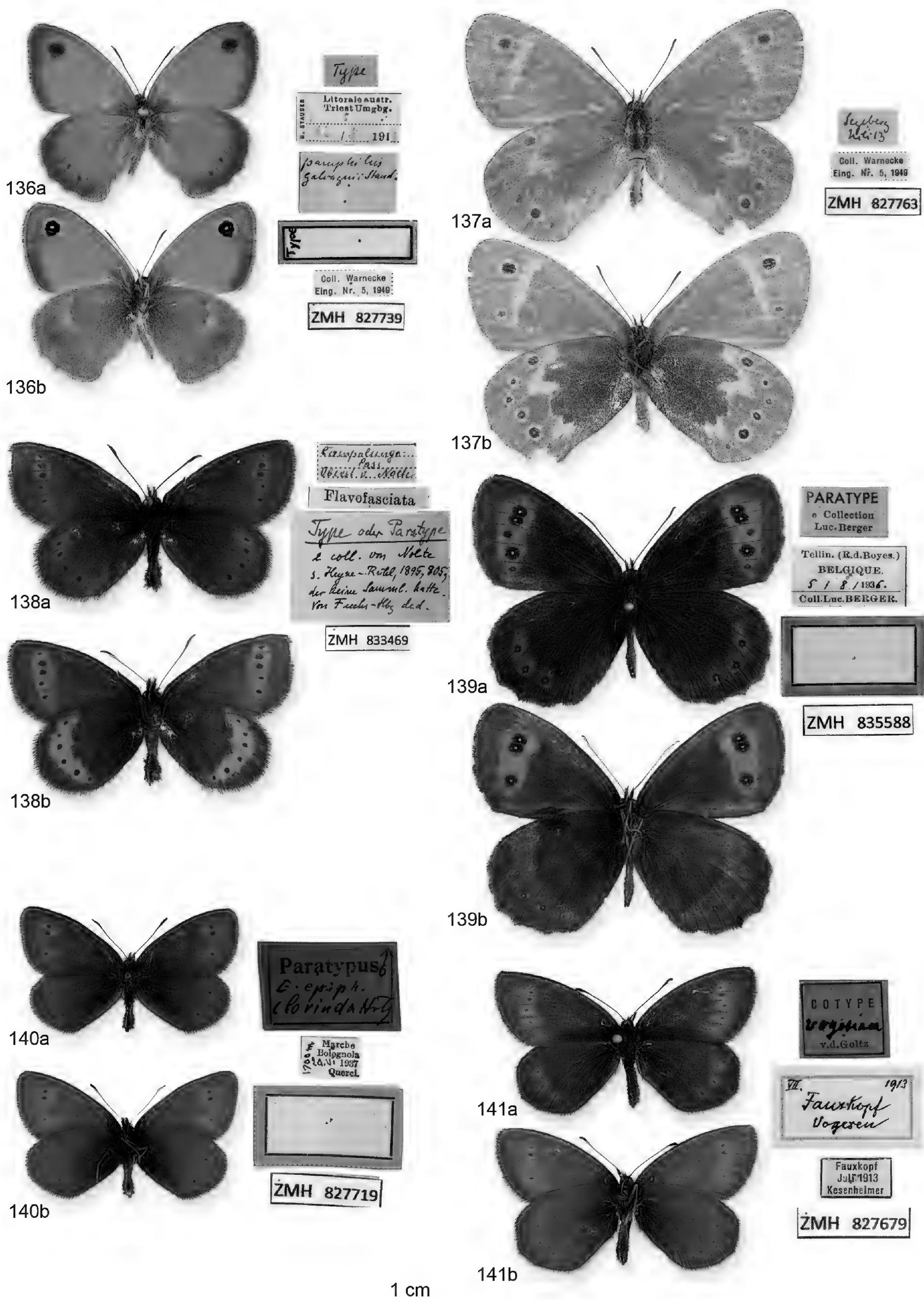
**Original combination.** "*Erebia ottomana* ssp. *benacensis* nov." Warren, 1933 Ent. Rec. 45: 40.

**Current combination.** *Erebia ottomana benacensis* Warren, 1933.

**Current status.** Junior subjective synonym of nomotypical *Erebia ottomana* Herrich-Schäffer, (1847).

**Type material.** Syntypes 5♂♂ (ZMH 833449–833453) (Fig. 144). "4.7" // "Teriolis merid. / Monte Baldo / 2000 m. / coll. F. Dannehl" // "4.7. 1930 / Mte. Baldo 2000 m / (Gardasee)" // "ZMH 833449"; "4.7" // "Teriolis merid. / Monte Baldo / 2000 m. / coll. F. Dannehl" // "4.7. 1930 / Mte. Baldo 2000 m / (Gardasee)" // "ZMH 833450"; "5.7" // "Teriolis merid. / Monte Baldo / 2000 m. / coll. F. Dannehl" // "5.7. 1930 / Mte. Baldo 2000 m / (Gardasee)" // "ZMH 833451".

**Type locality.** Italy: "Mte. Baldo near Lake Garda".



**Plate 20.** 136. *Coenonympha pamphilus galvagnii* Stauder, 1923; 137. *Coenonympha tullia* f. *maculata* Warnecke, 1942; 138. *Erebia flavofasciata* Heyne, 1895; 139. *Erebia aethiops peneplana* Berger, 1936; 140. *Erebia epiphron clorinda* Hartig, 1940; 141. *Erebia epiphron vogesiaca* Goltz, 1914. a. Dorsal view, b. ventral view.

### 145. *kotzscheae* Goltz, 1937

**Original combination.** “*Erebia kotzscheae*” Goltz, 1937 Ent. Rdsch. 54: 363.

**Current combination.** *Paralasa kotzscheae* (Goltz, 1937).

**Current status.** Valid species.

**Type material.** Syntype 1♂ (ZMH 827715) (Fig. 145). “Nord-Ost-Hindukusch / Nuksan-Pass-Nordseite / Alpenwiesenzone / 3500–4000 m Mitte Juli / leg. H.&E. Kotzsch” // “COTYPE / *kotzscheae* / v.d. Goltz” // “Kotschi v.d. Goltz” // “Coll. Bytinski-Salz / Eing Nr 20 – 60” // “ZMH 827715”.

**Type locality.** Afghanistan: Hindukush.

### 146. *maxima* Bang-Haas, 1933

**Original combination.** “*Satyrus autonoë maxima* O. B.-Haas, subsp. nov.” Bang-Haas, 1933 Ent. Z. 47: 98.

**Current combination.** *Hipparchia autonoë maxima* (Bang-Haas, 1933).

**Current status.** Valid subspecies.

**Type material.** Syntypes 2♂♂ (ZMH 827681–827682) (Fig. 146). “Kansu mer. / Min-chan / Tanho / 2500 m. Juli” // “Co-Type / O. Bang-Haas” // “L.13 / *Sat. autonoë - / maxima / O.B.H.*” // “Sammlung / R. Jähnig / Eing Nr. 29, 1949” // “ZMH 827681”; “Kansu mer. or. / Fuxiang / Peilingschan sept. / 2500 m. Juli” // “Co-Type / O. Bang-Haas” // “L.14 / *Sat. autonoë - / maxima / O.B.H.*” // “Sammlung / R. Jähnig / Eing Nr. 29, 1949” // “ZMH 827682”.

**Type locality.** China: “Kansu mer., Lihsien, Kialing Fluß, 2500 m.”

### 147. *persiscana* Verity, 1937

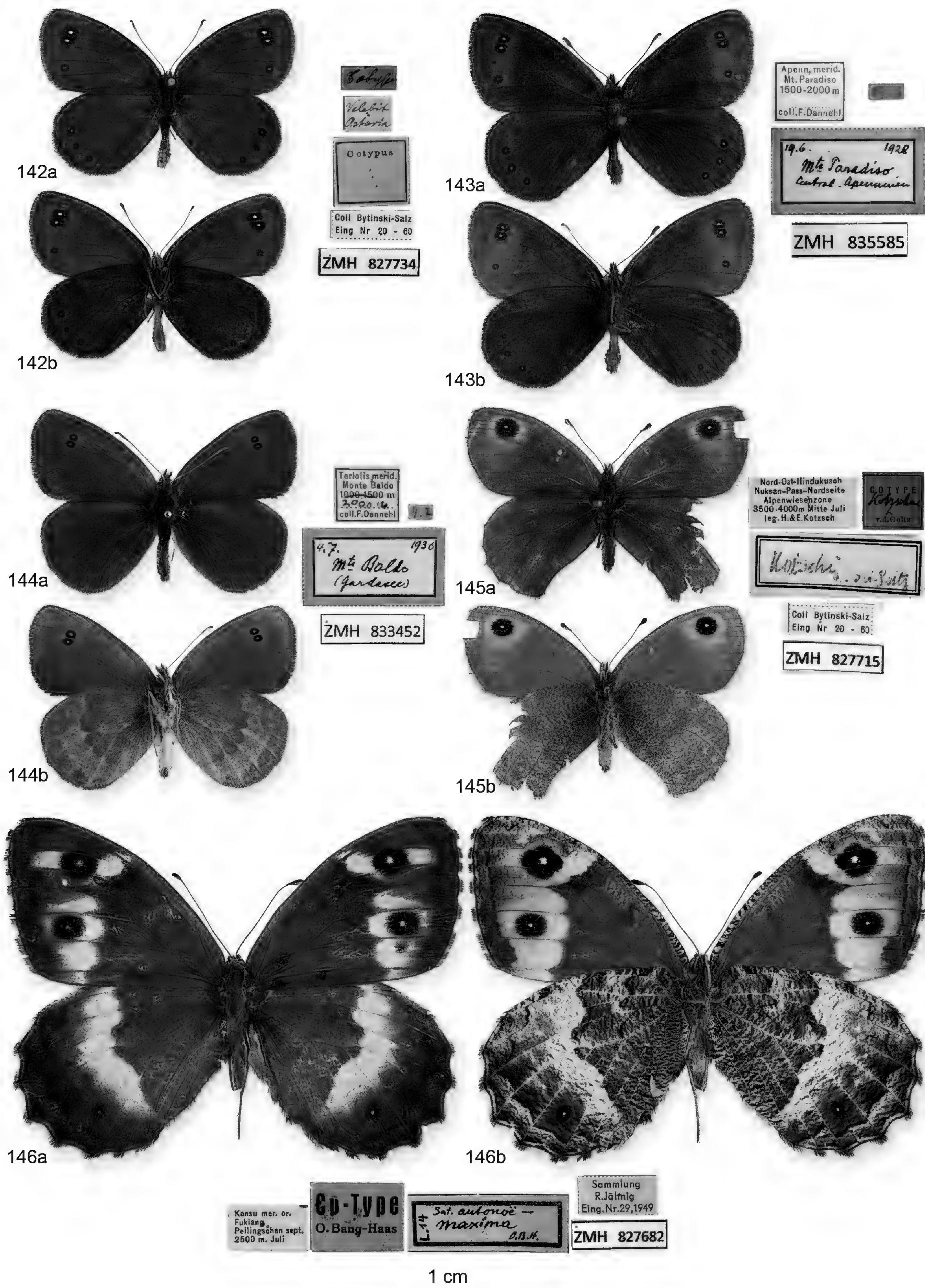
**Original combination.** “*Eumenis allionii*, G.-H. = *fatua* Freyer, *persiscana*, nom. nov.” Verity, 1937 Ent. Rec. 49: 100.

**Current combination.** *Hipparchia fatua persiscana* (Verity, 1937).

**Current status.** Valid subspecies.

**Type material.** Syntypes 31♂♂ (ZMH 827683–827713) (Fig. 147). “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827683”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827684”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827685”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827686”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing.

Nr. 20 - 60” // “ZMH 827687”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827688”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827689”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827690”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827691”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827692”; “Iran / Keredj 1800 m / 21.8.1936 / Brandt” // “Cotypus” // “ssp. *persicana* / Vrty” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827693”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827694”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827695”; “Iran / Keredj 1800 m / 25/8 1936 / Brandt” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827696”; “Iran / Keredj 1800 m / 25/8 1936 / Brandt” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827697”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827698”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827699”; “Iran / Keredj 1800 m / 25/8 1936 / Brandt” // “201” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827700”; “Iran / Keredj 1800 m / 21/8 1936 / Brandt” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827701”; “Iran / Keredj 1200 m / 1936 / Brandt” // “1600 25/VIII” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827702”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827703”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827704”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827705”; “Iran / Keredj (1200 m.) / 1936 / Brandt” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827706”; “Iran / Keredj 1600 m / 25/8 1936 / Brandt” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827707”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827708”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827709”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827710”; “Iran / Keredj 1200 m / 1936



**Plate 21.** 142. *Erebia melas leonhardi* Fruhstorfer, 1918; 143. *Erebia meolans paradisi* Dannehl, 1929; 144. *Erebia ottomana benacensis* Warren, 1933; 145. *Paralasa kotzscheae* (Goltz, 1937); 146. *Hipparchia autonoe maxima* (Bang-Haas, 1933). **a.** Dorsal view, **b.** ventral view.

/ Brandt” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20 - 60” // “ZMH 827711”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827712”; “Iran / Keredj 1600 m / VIII 1936 / leg. F. Brandt / coll. Bytinski-Salz” // “Cotypus” // “Coll. Bytinski-Salz / Eing. Nr. 20, 1960” // “ZMH 827713”.

**Type locality.** Iran: Tehran, “Keredj [Karaj], in the Elburz Mountains, at m. 1500 to 1600”.

#### 148. ab. pallida Bubacek, 1923

**Original combination.** “*Satyrus neomiris* God. ab. *nova pallida* Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

**Current combination.** *Hipparchia neomiris* ab. *pallida* (Bubacek, 1923).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827726) (Fig. 148). “Type / *Sat. neomiris* God / ab. *pallida* Bub. / Otto Bubacek Z.BG. 1922” // “Col de Verg. Cor- / se Juli 1921 / Col. O. Bubacek” // [blank label] // “ZMH 827726”.

**Original locality.** France: Corse, Col de Verg.

**Remarks.** Bubacek (1923) proposed this name as an aberration of *S. neomiris* (Godart, 1824). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

#### 149. ab. *albinervata* Warnecke, 1944

**Original combination.** “[*Satyrus semele* L.] n. ab. *albinervata*” Warnecke, 1944 Dt. Ent. Z. Iris 57: 40.

**Current combination.** *Hipparchia semele* ab. *albinervata* (Warnecke, 1944).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Holotype” 1♀ (ZMH 827749) (Fig. 149). “Insel Sylt / Kampen / VIII 1942” // “n.f. *albinervata* / Warnecke / Type” // “Holotype” // “Sammlung G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827749”.

**Original locality.** Germany: “Sylt, Kampen”.

**Remarks.** Warnecke (1944) proposed this name as a form of *S. semele* (Linnaeus, 1758). As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

#### 150. *siviae* Fuchs, 1954

**Original combination.** “*Lymanopoda shefteli siviae*” Fuchs, 1954 in Titschak, Beit. zur Fauna Perus 4: 84.

**Current combination.** *Lymanopoda shefteli siviae* Fuchs, 1954.

**Current status.** Valid subspecies.

**Type material.** Lectotype 1♂ (ZMH 827764) and 3♂♂ *paralectotypes* (ZMH 827765–827767) (Fig. 150). “*Lymnopoda / siviae* / v. Fuchs / Cordillere von / Siv- ia, Ayacucho / 2500 m.” // “Type” // “Holotype / *Lymnopoda siviae* / von Fuchs” // “*Lymnopoda galactea / shefteli* Dyar / G. Lamas. det. 1978” // “Lectotype ♂ / *Lymnopoda / siviae* Fuchs / by G. Lamas, 1978” // “Sammlung / W. v. Fuchs / Eing Nr. 4, 1956” // “ZMH 827764”; “Rio Piene / ca. 2600 m / 7/1920 / Type” // “285 / *galactea* ab. / Rio Piene 2600 m. 7/20” // “ZMH 82765”; “Rio Piene / ca. 2600 m / 7/1920 / Type” // “ZMH 82766”; “Rio Piene / ca. 2600 m / 7/1920 / Type” // “ZMH 82767”.

**Type locality.** Peru: “... oberhalb Sivia gefangen, [above Sivia] 2500–3000 m”.

#### 151. *cocuzzana* Stauder, 1914

**Original combination.** “*Melanargia arge* Sulz. (=amphitrite Hb.) *cocuzzana* m., subspec. *nova*” Stauder, 1914 Zeit. Wiss. Ins. Biol. 10: 375, f. 12–15.

**Current combination.** *Melanargia arge cocuzzana* Stauder, 1914.

**Current status.** Junior subjective synonym of nomotypical *Melanargia arge* (Sulzer, 1776).

**Type material.** Paratypes 3♂♂ (ZMH 827673–827675) (Fig. 151). “Calabria / Umg. Paola-Co-senza 4.6.1913 / H. Stauder” // “*arge cocuzzana* Stau- / der Paratype” // “ZMH 827673”; “Calabria / Umg. Paola- Co-senza 4.6.1913 / H. Stauder” // “*cocuzzana*” // “*arge cocuzzana* / na Stauder / Paratype” // “ZMH 827674”; “Ital. mer. / pen.-Surrentina / 8.6.1913 / H. Stauder” // “*Arge cocuzzana* / Stauder” // “*arge cocuzzana* Stau- / der Paratype” // “ZMH 827675”.

**Type locality.** Italy: vicinity of Paola, Monte Cocuzzo “an den Hängen [slopes of] des Monte Martinello und Cocuzzo bei Paola”.

#### 152. ab. *huenei* Hirschke, 1910

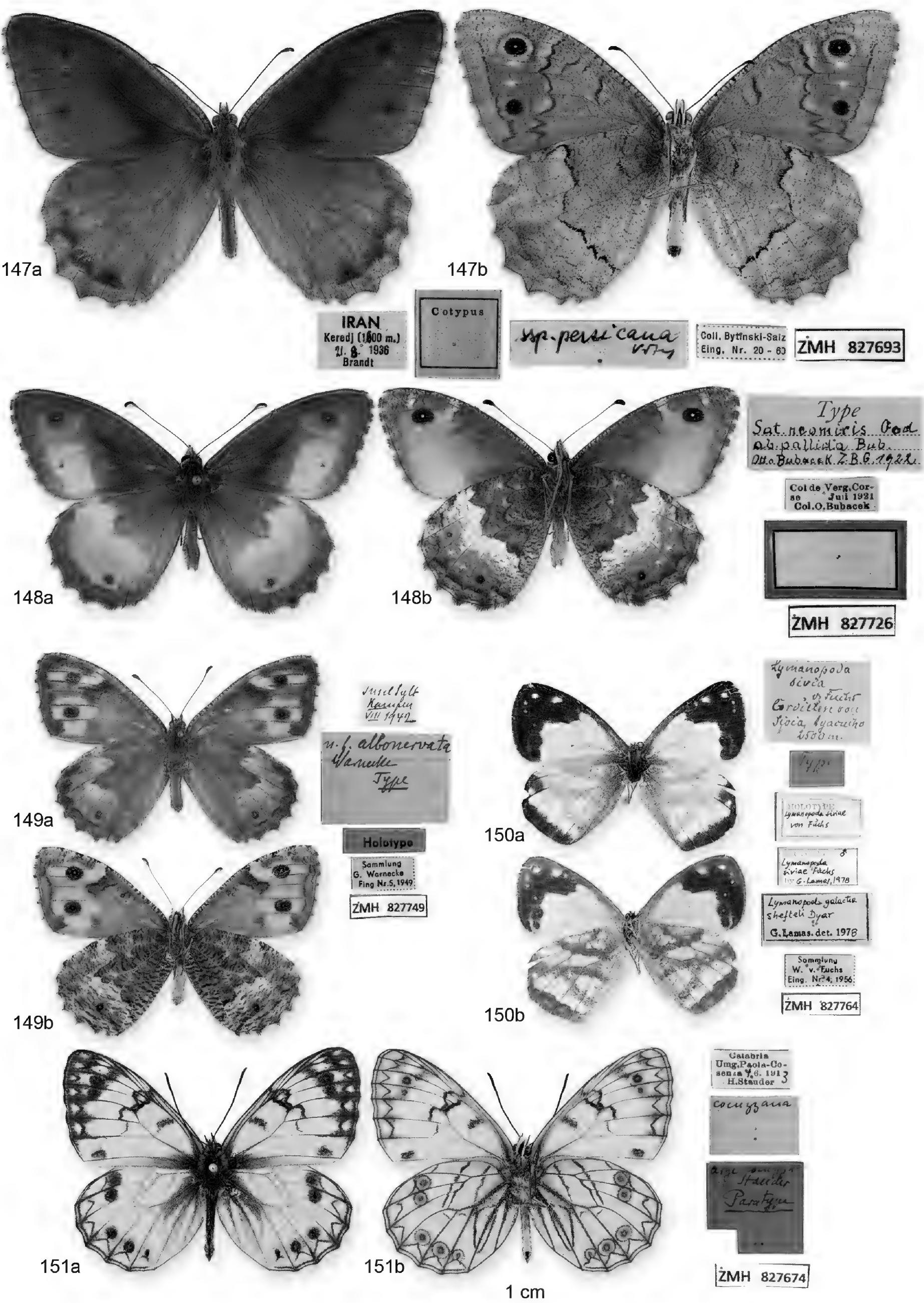
**Original combination.** “*Pararge hiera* var. *ominata* Krul. ab. *Huenei*” Hirschke, 1910 Verh. Zool. Bot. Ges. Wien 60: 411.

**Current combination.** *Lasiommata petropolitana* *ominata* ab. *huenei* (Hirschke, 1910).

**Current status.** Infrasubspecific and hence unavailable name..

**Original material.** Labelled as “Type” 1♂ (ZMH 827717) (Fig. 152). “Estonia / Lechts / FR. V. HUENE” // “Type / Verh. z.b.g. / LX. 1910” // “*Pararge hiera* / var. *ominata* / ab. *huenei* / Hirschke / Estland” // “Coll. Bytinski-Salz / Eing. Nr. 20 – 60” // “ZMH 827717”.

**Original locality.** Estonia: “aus Esthland”.



**Plate 22.** **147.** *Hipparchia fatua persicana* (Verity, 1937); **148.** *Hipparchia neomiris* ab. *pallida* (Bubacek, 1923); **149.** *Hipparchia semele* ab. *albinervata* (Warnecke, 1944); **150.** *Lymanopoda shefteli siviae* Fuchs, 1954; **151.** *Melanargia arge cocuzzana* Stauder, 1914. **a.** Dorsal view, **b.** ventral view.

**Remarks.** Hirschke (1910) proposed this name as an aberration of *P. h. ominata* Krulikowsky, 1903, therefore, as stated by articles 45.6.1 and 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable.

### 153. *felix* Warnecke, 1929

**Original combination.** “*Pararge felix* n. spec. Warn.” Warnecke, 1929 Int. Ent. Z. 22: 365.

**Current combination.** *Lasiommata felix* (Warnecke, 1929).

**Current status.** Valid species.

**Type material.** Paratype 1♀ (ZMH 827721) (Fig. 153). “S.W. Arabia / Yemen, Sanāa / II.1928. Expedi- / tion Rathjens” // “28.2. / Sanaa” // “*Pararge felix* / Warnecke 1929 / ♀ Paratype” // “Para-Type” // “*Pararge megera - felix* Warn.” // “Sig. G. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827721”.

**Type locality.** “Yemen, Sanaa”.

### 154. *ab. diluta* Bubacek, 1923

**Original combination.** “*Pararge aegeria* L. ab. nova diluta Bub.” Bubacek, 1923 Verh. Zool. Bot. Ges. Wien 72: (30).

**Current combination.** *Pararge aegeria* ab. *diluta* Bubacek, 1923.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827678) (Fig. 154) “Type / *Par. aegeria* L. / ab. diluta Bub. / Otto Bubacek ZBG 1922” // [blank label] // “Evisa, Corse / Juli 1921 / Col. O. Bubacek” // “ZMH 827678”.

**Original locality.** France: Korsika [Corse].

**Remarks.** Bubacek (1923) proposed this name as an aberration of *P. aegeria* (Linnaeus, 1758), therefore, as stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable.

### 155. *f. albiplaga* Warnecke, 1942

**Original combination.** “*Pararge algeria* L. subsp. *egerides* Stdgr. n. f. *albiplaga* ♀.” Warnecke, 1942 Dt. Ent. Z. Iris 56: 102.

**Current combination.** *Pararge aegeria* *egerides* f. *albiplaga* Warnecke, 1942.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♀ (ZMH 827668) (Fig. 155). “Holstein / Segeberg / 2.-10.8.35” // “n.f. *albiplaga* / Warn. Type / Iris 1942, 102” // “Type” // “ZMH 827668”.

**Original locality.** Germany: Holstein [label indicates Segeberg].

**Remarks.** Warnecke (1942) proposed this name as a form of *P. a. egerides* (Staudinger, 1871), therefore, as stated by article 45.6.1 it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable. In the original description the name “aegeria” is wrongly spelled “algeria” (M. Wiemers pers. comm.).

### 156. *ab. hermini* Hirschke, 1910

**Original combination.** “*Pararge megera* var. *lyssa* B. ab. *hermini*” Hirschke, 1910 Verh. Zool. Bot. Ges. Wien 60: 411.

**Current combination.** *Lasiommata megera* *lyssa* ab. *hermini* (Hirschke, 1910).

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 1♂ (ZMH 827720) (Fig. 156). “Hirschke. Wien / Zara / Mai” // “Type / Verh. Z.G.B. / LX, 1910” // “*Pararge megera* / var. *Lyssa* ab. / *hermini* Hirschke / Dalmatien 5.1909” // “Coll. Bytinski-Salz / Eing Nr 20 – 60” // “ZMH 827720”.

**Original locality.** Croatia: Dalmatia, vicinity of Gravosa and Zara.

**Remarks.** Hirschke (1910) proposed this name as an aberration of *P. m. lyssa* “B.” (sic, recte Hübner, 1829), therefore, as stated by articles 45.6.1 and 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable.

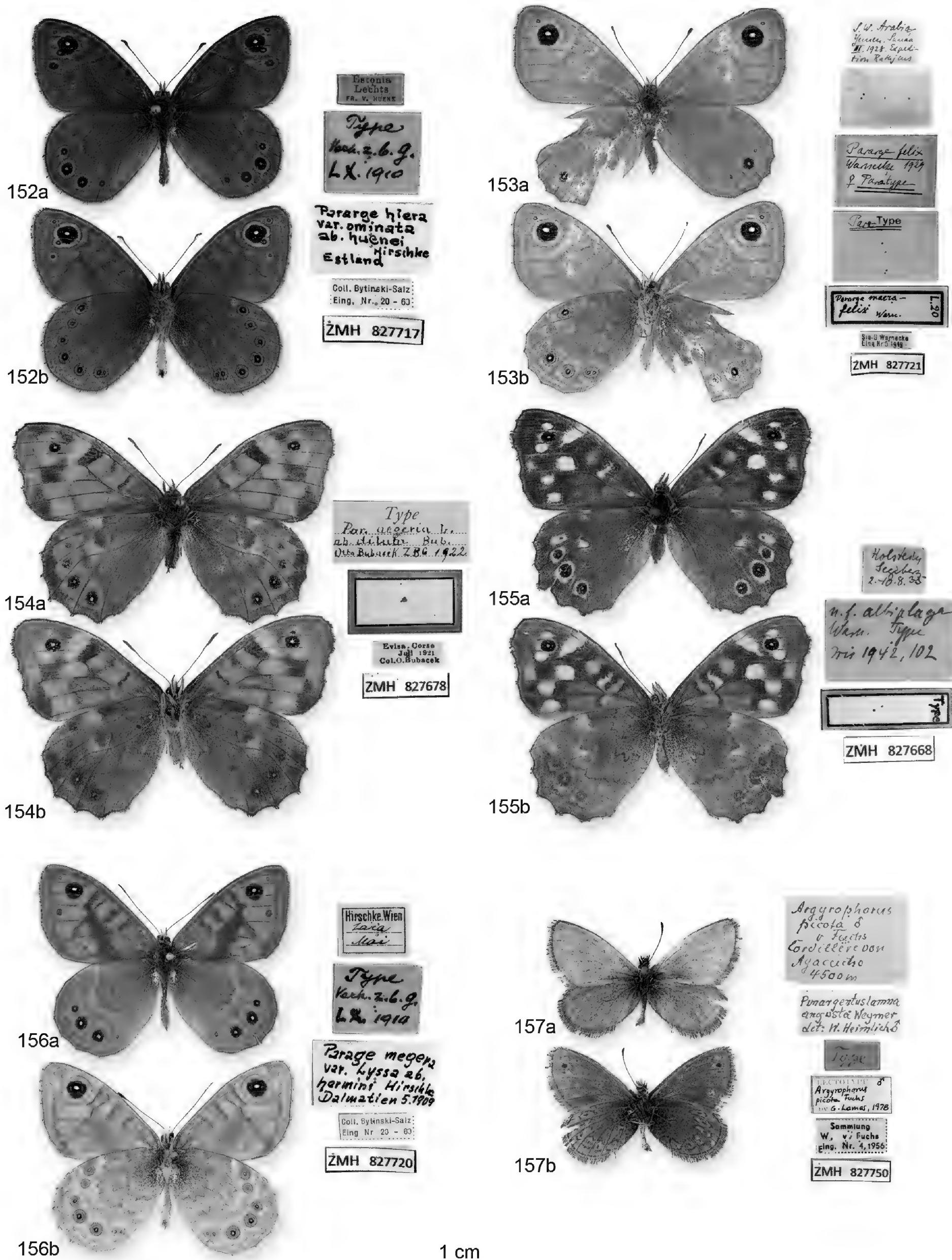
### 157. *picota* Fuchs, 1954

**Original combination.** “*Argyrophorus picota*” Fuchs, 1954 in Titschak, Beit. zur Fauna Perus 4: 84.

**Current combination.** *Punargentus angusta* *picota* (Fuchs, 1954).

**Current status.** Valid subspecies.

**Type material.** Lectotype 1♂ (ZMH 827750) (Fig. 157) 7♂1♀ paralectotypes (ZMH 827751–827758). “*Argyrophorus* / *picota* ♂ / v. Fuchs / Cordillere von / Ayacucho / 4500 m” // “*Punargentus lamna* / angusta Weymer / det. W. Heinrich ♂” // “Type” // “Lectotype ♂ / *Argyrophorus* / *picota* Fuchs / by G. Lamas, 1978” // “Sammlung / W. v. Fuchs / Eing. Nr. 4, 1956” // “ZMH 827750”; “*Punargentus lamna* / angusta Weymer / det. W. Heinrich ♂” // “*Argyrophorus* / *picota* ♂ / v. Fuchs / Cordillere von / Ayacucho / 4500 m” // “Type” // “Sammlung / W. v. Fuchs / Eing. Nr. 4, 1956” // “ZMH 827751”; “Ica / Ayacucho / ca. 4000 m. / 7/1920 / Type” // “*Punargentus lamna* / angusta Weymer / det. W. Heinrich ♂” // Coll. H. Rödinger / Eing. Nr. 30, 52” // “ZMH 827752”; “Ica / Ayacucho / ca. 4000 m. / 7/1920 / Type” // “*Punargentus lamna* / angusta Weymer / det. W. Heinrich ♂” // Coll. H. Rödinger / Eing. Nr. 30, 52” // “ZMH 827753”; “Ica / Ayacucho / ca. 4000 m. / 7/1920 / Type” // “*Punargentus lamna* / angusta Weymer / det. W. Heinrich ♂” // “133 / angusta 8/20 / Ayacucho 4/5000 m”



**Plate 23. 152.** *Lasiommata petropolitana* *ominata* ab. *huenei* (Hirschke, 1910); **153.** *Lasiommata felix* (Warnecke, 1929); **154.** *Pararge aegeria* ab. *diluta* Bubacek, 1923; **155.** *Pararge aegeria* *egerides* f. *albiplaga* Warnecke, 1942; **156.** *Lasiommata megera* *lyssa* ab. *hermini* (Hirschke, 1910); **157.** *Punargentus angusta* *picota* (Fuchs, 1954). **a.** Dorsal view, **b.** ventral view.

// "Coll. H. Rödinger / Eing. Nr. 30, 52" // ZMH 827754";  
 "Ica / Ayacucho / ca. 4000 m. / 7/1920 / Type" // "*Punargentus lamna* / angusta Weymer / det. W. Heinrich ♂" //  
 Coll. H. Rödinger / Eing. Nr. 30, 52" // ZMH 827756";  
 "Ica / Ayacucho / ca. 4000 m. / 7/1920 / Type" // "*Punargentus lamna* / angusta Weymer / det. W. Heinrich ♂" //  
 Coll. H. Rödinger / Eing. Nr. 30, 52" // ZMH 827757";  
 "Ica / Ayacucho / ca. 4000 m. / 7/1920 / Type" // "*Punargentus lamna* / angusta Weymer / det. W. Heinrich ♀" //  
 Coll. H. Rödinger / Eing. Nr. 30, 52" // ZMH 827758".

**Type locality.** Peru: near Ayacucho "... Kodillere bei Ayacucho, nur in Höhen über 4000 m, bis 5000 m" [Cordillere close to Ayacucho, only at altitudes above 4000 m, to 5000 m].

### 158. *arminii* Stauder, 1916

**Original combination.** "*Epinephele ida arminii* subsp. nova." Stauder, 1916 Zeit. Wiss. Ins. Biol. 12: 62.

**Current combination.** *Pyronia cecilia arminii* (Stauder, 1916).

**Current status.** Junior subjective synonym of *Pyronia cecilia cecilia* (Vallantin, 1894).

**Type material.** Syntype 1♂ (ZMH 827716) (Fig. 158). "Type" // "Calabria mer. / Aspromonte 1600 m. / 26.6.1920 / H. Stauder legit." // "*Ida Arminii* / Stauder" // "Type" // "Sammlung / G. Warnecke / Eing. Nr. 5, 1949" // "ZMH Nr. 5, 1949".

**Type locality.** Italy: Calabria.

### 159. *liupiuschani* Bang-Haas, 1933

**Original combination.** "*Satyrus actaea liupiuschani* O. B.-Haas, subsp. nov." Bang-Haas, 1933 Ent. Z. 47: 99.

**Current combination.** *Satyrus ferula liupiuschani* Bang-Haas, 1933.

**Current status.** Junior subjective synonym of *Satyrus ferula ganssuensis* Grum-Grshimailo, 1893.

**Type material.** Syntype 1♂ (ZMH 827669) (Fig. 159). "Kansu mer. / Tsing-schui / Liu-pin-schan / 2000 m. Juli" // "Co-Type / O. Bang-Haas" // "L.17 / Sat. *actaea* - / *liupiuschani* O.B.H." // "Sammlung / R. Jähnig / Eing. Nr. 29, 1949" // "ZMH 827669".

**Type locality.** China: "Kansu mer., Tsingschui, Liu Piu Schan, 2000 m".

### 160. *kintschouensis* Bang-Haas, 1939

**Original combination.** "*Triphysa phryne kintschouensis* O. Bang-Haas, subsp. nov." Bang-Haas, 1939 Dt. Ent. Z. Iris 53: 53.

**Current combination.** *Coenonympha phryne kintschouensis* (Bang-Haas, 1939).

**Current status.** Junior subjective synonym of *Coenonympha dohrnii nervosa* Motschulsky, 1866.

**Type material.** Syntypes 2♂♂ (ZMH 827759–827760) (Fig. 160). "18." // "Mandschuria mer. occ. / Prov. Fengtien / Kintschou / 100 m. April" // "Co-Type / O. Bang-Haas" // "*Phryne* / v. *kintschouensis* / O.B.H." // "L.21 / *Triphysa phryne* - / *kintschouensis* / O.B.-Haas" // "Sammlung R. Jähnig / Eing Nr. 29, 1949" // "ZMH 827759"; "17." // "Mandschuria mer. occ. / Prov. Fengtien / Kintschou // "Co-Type / O. Bang-Haas" // "L.22 / *Triphysa phryne* - / *kintschouensis* / O.B.-Haas" // "Sammlung R. Jähnig / Eing Nr. 29, 1949" // "ZMH 827760".

**Type locality.** China: "Manchuria merid., Prov. Fengtien, Kintschou, 100 m.".

### Unpublished, unavailable names

#### 161. ab. minor Meinhard

**Original combination.** *Melanargia galathea* v. *sakaria* ab. minor Meinhard.

**Current status.** "in litteris" name and hence not available.

**Original material.** Labelled as "Type" 1♂ (ZMH 835597) (Fig. 161). "Type" // 7/7 1920 / Göttingen / Warteberg" // "ZMH 835597".

**Remarks.** This taxon cannot be found in the literature. As stated by articles 45.6.1 and 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used "aberration", "ab.", or the author expressly gave it infrasubspecific rank) and is hence unavailable.

#### 162. ab. caeca Dannehl

**Original combination.** *Epinephele ida* ab. *caeca* Dannehl.

**Current status.** "in litteris" name and hence not available.

**Original material.** Labelled as "Cotype" 1♂ (ZMH 833467) (Fig. 162). "1.6" // Sicilia / Mt. Cuccio / coll. Dannehl" // "Cotype / caeca / Dhl" // "Cotype." // "1.6 1932 / Mt. Cuccio, / -Sizilien-" // "ZMH833467".

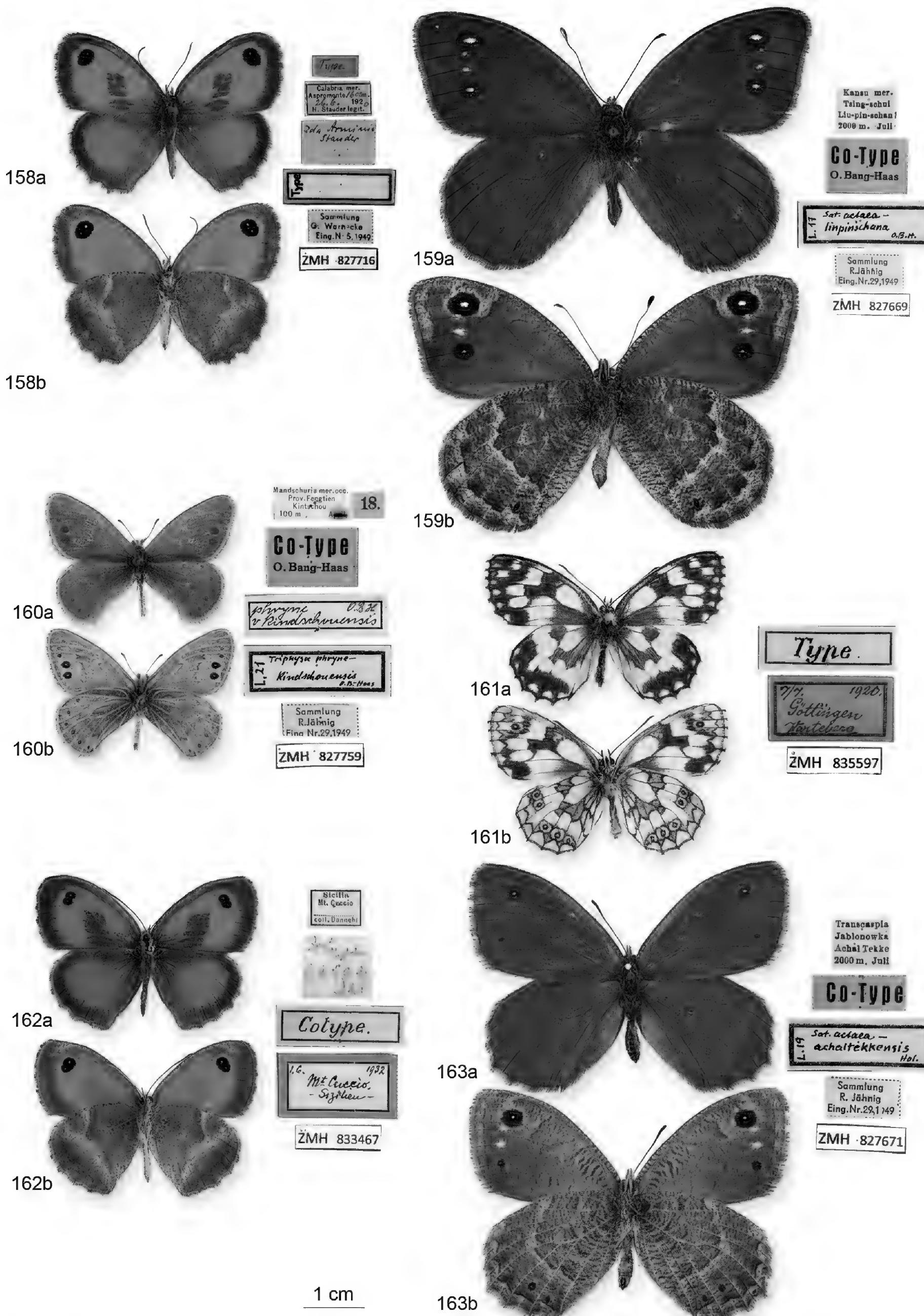
**Remarks.** This taxon cannot be found in the literature. As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used "aberration", "ab.") and is hence unavailable. The current name of the species is *Pyronia cecilia* (Vallantin, 1894).

#### 163. *achaltekkensis* Holik

**Original combination.** *Satyrus actaea achaltekkensis* Holik.

**Current status.** "in litteris" name and hence not available.

**Original material.** Labelled as "Cotypes" 2♂♂ (ZMH 827670–827671) (Fig. 163). "Transcasplia / Jablonowka / Achal Tekke / 2000 m. Juli" // "Co-Type" // "L.18 / Sat.



**Plate 24.** 158. *Pyronia cecilia arminii* (Stauder, 1916); 159. *Satyrus ferula liupiuschani* Bang-Haas, 1933; 160. *Coenonympha phryne kintschouensis* (Bang-Haas, 1939); 161. *Melanargia galathea* v. *sakaria* ab. *minor* Meinhard; 162. *Epinephele ida* ab. *caeca* Dannehl; 163. *Satyrus actaea achaltekkensis* Holik. **a.** Dorsal view, **b.** ventral view.

*actaea - / achaltekensis* Hol.” // “Sammlung / R. Jähnig / Eing. Nr. 29, 1949” // “ZMH 827670”; “Transcaspia / Jablonowka / Achal Tekke / 2000 m. Juli” // “Co-Type” // “L.19 / Sat. *actaea - / achaltekensis* Hol.” // “Sammlung / R. Jähnig / Eing. Nr. 29, 1949” // “ZMH 827671”.

**Original locality.** Turkmenistan, Achal Tekke.

**Remarks.** This taxon cannot be found in the literature. The current name is *Satyrus iranica daubi* Gross & Ebert, 1975.

#### 164. *rossarmenia* Bang-Haas

**Original combination.** *Satyrus actaea rossarmenia* Bang-Haas.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Cotype” 1♂ (ZMH 827672) (Fig. 164). “Kagysman / Russ. Armen” // “Co-Type” // “L.16 / Sat. *actaea / rossarmenia* ?” // “Sammlung R. Jähnig / Eing. Nr. 29, 1949” // “ZMH 827672”.

**Remarks.** This taxon cannot be found in the literature. The current name is *Satyrus amasina* Staudinger, 1861.

**Family Riodinidae Grote, 1895**

**Subfamily Nemeobiinae Bates 1868**

**Unpublished, unavailable names**

#### 165. *ab. friesi* Meinhard

**Original combination.** *Hamearis lucina ab. friesi* Meinhard.

**Current status.** “in litteris” name and hence not available.

**Original material.** Labelled as “Type” 1♂ (ZMH 835594) (Fig. 165). “Type” // “ab. friesi Mein.” // “10/5 1911 / Göttingen / Hainberg” // “ZMH 835594”.

**Remarks.** This taxon cannot be found in the literature. As stated by article 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”) and is hence unavailable. The current name is *Hamearis lucina* (Linnaeus, 1758).

**Family Hesperiidae Latreille, 1809**

**Subfamily Pyrginae Burmeister, 1878**

**Tribus Carcharodini Verity, 1940**

#### 166. *wissmanni* Warnecke, 1934

**Original combination.** “*Carcharodus swinhoei* Wats. nov. subsp. *Wissmanni* Warn.” Warnecke, 1934 Mitt. Münch. Ent. Ges. 24: 20.

**Current combination.** *Carcharodus alceae wissmanni* Warnecke, 1934.

**Current status.** Valid subspecies.

**Type material.** Paratypes 5♂♂ (ZMH 827637–ZMH 827638, ZMH 827640–ZMH 827642) (Fig. 166). “S. W. Arabien / Sana’ā (Yemen) / 27.2.28 v. Wissm.” // “Sig. G.

Warnecke / Eing. Nr. 5, 1949” // “*Carcharodus / Swinhoei* Wats. / subsp. *wissmanni* / Warn. / Cotype” // “Coll. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827637”; “Alceae Swinhoei Wats. / S.W. Arabia / Sana’ā (Yemen) 27.2.28 / Rathjens - v. Wissmann” // “*Carcharodus / Swinhoei* Wats. / subsp. *wissmanni* / Warn. / Cotype” // “Coll. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827638”; “Süd-Arabien / Yemen: San’āā / 8.8.31 Rathjens” // “Paratype” // Coll. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827640”; “Südwestarabien / Yemen: San’āā / Rathjens 24.6.31” // “Paratype” // Coll. Warnecke / Eing. Nr. 5, 1949” // “ZMH 827641”; “Südwestarabien / Yemen: San’āā / Rathjens 24.7.31” // “Paratype” // “ZMH 827642”.

**Type locality.** Yemen: Sanaa “Südwest-Arabien, San’āā (Yemen)”

#### 167. *v. postesseloides* Verity, 1938

**Original combination.** “*Spialia orbifer*, Hüb., race *tesselloides*, H.-S., II gen. *postesseloides*, nom. nov.” Verity, 1938 Ent. Rec. 50 Suppl. (4).

**Current combination.** *Spialia orbifer orbifer* v. *postesseloides* Verity, 1938.

**Current status.** Infrasubspecific and hence unavailable name.

**Original material.** Labelled as “Type” 4♂♂ (ZMH 833498–833501) (Fig. 167). “*postesseloides* Vrty” // “Macedonia / Olympus, 2500’ / Aug 24, 1935 / Romei” // [blank label] // “ZMH 833498”; “*postesseloides* Vrty” // “Macedonia / Olympus, 2500’ / July 25, 1936 / Romei” // [blank label] // “ZMH 833499”; “*postesseloides* Vrty” // “Macedonia / Olympus, 2500’ / July 6, 1936 / Romei” // [blank label] // “ZMH 833500”; “*postesseloides* Vrty” // “Macedonia / Olympus, 2000’ / July 8, 1936 / Romei” // [blank label] // “ZMH 833501”.

**Original locality.** Greece: vicinity of Skala.

**Remarks.** Verity (1938) proposed this name as “nom. nov.” of *S. orbifer tesselloides* (Herrich-Schäffer, 1845), therefore, as stated by article 45.6.1 it is deemed to be an infrasubspecific name (the author expressly gave it infrasubspecific rank) and is hence unavailable. *Spialia orbifer tesselloides* is currently regarded as a junior subjective synonym of the nominate subspecies.

**Tribus Pyrgini Burmeister, 1878**

#### 168. *centralitaliae* Verity, 1920

**Original combination.** “*Hesperia alveus*, Hüb., race *centralitaliae*, mihi” Verity, 1920 Ent. Rec. 32: 4.

**Current combination.** *Pyrgus alveus centralitaliae* (Verity, 1920).

**Current status.** Valid subspecies.

**Original material.** Labelled as “Type” 4♂♂ (ZMH 833502–833505) (Fig. 168). “*centralitaliae* Vrty” // “Marche / Bolognola / 6.VII.1937 / Querci” // [blank label] // “ZMH 833502”; “*centralitaliae*

Vrty” // “Marche / Bolognola / 13.VII.1937 / Querci” // [blank label] // “ZMH 833503”; “centralitaliae Vrty” // “Marche / Bolognola / 22.VI.1937 / Querci” // [blank label] // “ZMH 833504”; “centralitaliae Vrty” // “Marche / Bolognola / 27.VI.1937 / Querci” // [blank label] // “ZMH 833505”.

**Original locality.** Italy: Bologna.

**Remarks.** Verity (1920) proposed this name as a “race” of *H. alveus* Hübner, [1803]. As it was given in trinomy and the content of the description clearly indicates that a geographical race was meant, this name is available as subspecific (article 45.6 ICZN 1999). The year on the specimen labels (1937) indicate specimens were collected 17 years after description (1920) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these four specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens

## 169. *badachschanana* Alberti, 1939

**Original combination.** “*Hesperia badachschanana* nov. sp.” Alberti, 1939 Ent. Rdsch. 56: 107.

**Current combination.** *Pyrgus badachschanana* (Alberti, 1939).

**Current status.** Valid species.

**Type material.** Holotype 1♂ (ZMH 827639) (Fig. 169). “HOLOTYPE ♂ / *Hesperia / badachschanana*” // “*Badachschan / Seba[...] - Tal / Alpenwiesenzone / 2800–3000 m Mitte Juni / leg. H.&E. Kotzsch*” // “Coll. Bytinski-Salz Coll / Eing. Nr. 20, 1960 Eing” // “ZMH 827639”.

**Type locality.** Afghanistan: Badakhshan.

**Remarks.** We follow SEL declaration on gender agreement (Sommerer 2002), as a result it should stay as *badachschanana*.

## 170. *picena* Verity, 1920

**Original combination.** “*Hesperia foulquieri*, Obth., race *picena*, mihi” Verity, 1920 Ent. Rec. 32: 4.

**Current combination.** *Pyrgus foulquieri picena* (Verity, 1920).

**Current status.** Valid subspecies.

**Original material.** Labelled as “Type” 4♂♂ (ZMH 833506–833509) (Fig. 170). “*Picena Vrty*” // “Marche / Bolognola / 2 VII 1937 / Querci” // [blank label] // “ZMH 833506”; “*Picena Vrty*” // “Marche / Bolognola / 8 Ag 1937 / Querci” // [blank label] // “ZMH 833507”; “*Picena Vrty*” // “Marche / Bolognola / 8 Ag 1937 / Querci” // [blank label] // “ZMH 833508”; “*Picena Vrty*” //

“Marche / Bolognola / 12 Ag 1937 / Querci” // [blank label] // “ZMH 833509”.

**Original locality.** Italy: Bolognola, Sibillini Mts.

**Remarks.** Verity (1920) proposed this name as a “race” of *H. foulquieri* Oberthür, 1910. As it was given in trinomy and the content of the description clearly indicates that a geographical race was meant, this name is available as subspecific (article 45.6 ICZN 1999). The year on the specimen labels (1937) indicate specimens were collected 17 years after description (1920) from the same location the original holotype material was collected. As a result, the black label of the specimens treated as “types” is erroneous. The specimen collected from the same geographical location from which the type specimen was collected is called topotype. According to ICZN (1999), a topotype has no formal standing and is not regulated by the Code. Therefore, these four specimens are erroneously labelled as types, should be annotated as “Not a Type” and are treated here as “Non-type” specimens.

## 171. ab. *alboradiata* Bubacek, 1926

**Original combination.** “*Hesperia sidae* Esp. var. *onopordi* H.-S. ab. *nova alboradiata* Bub.” Bubacek, 1926 Verh. Zool. Bot. Ges. Wien 76: 174.

**Current combination.** *Pyrgus sidae* ab. *alboradiata* (Bubacek, 1926).

**Current status.** Infrasubspecific and hence unavailable name.

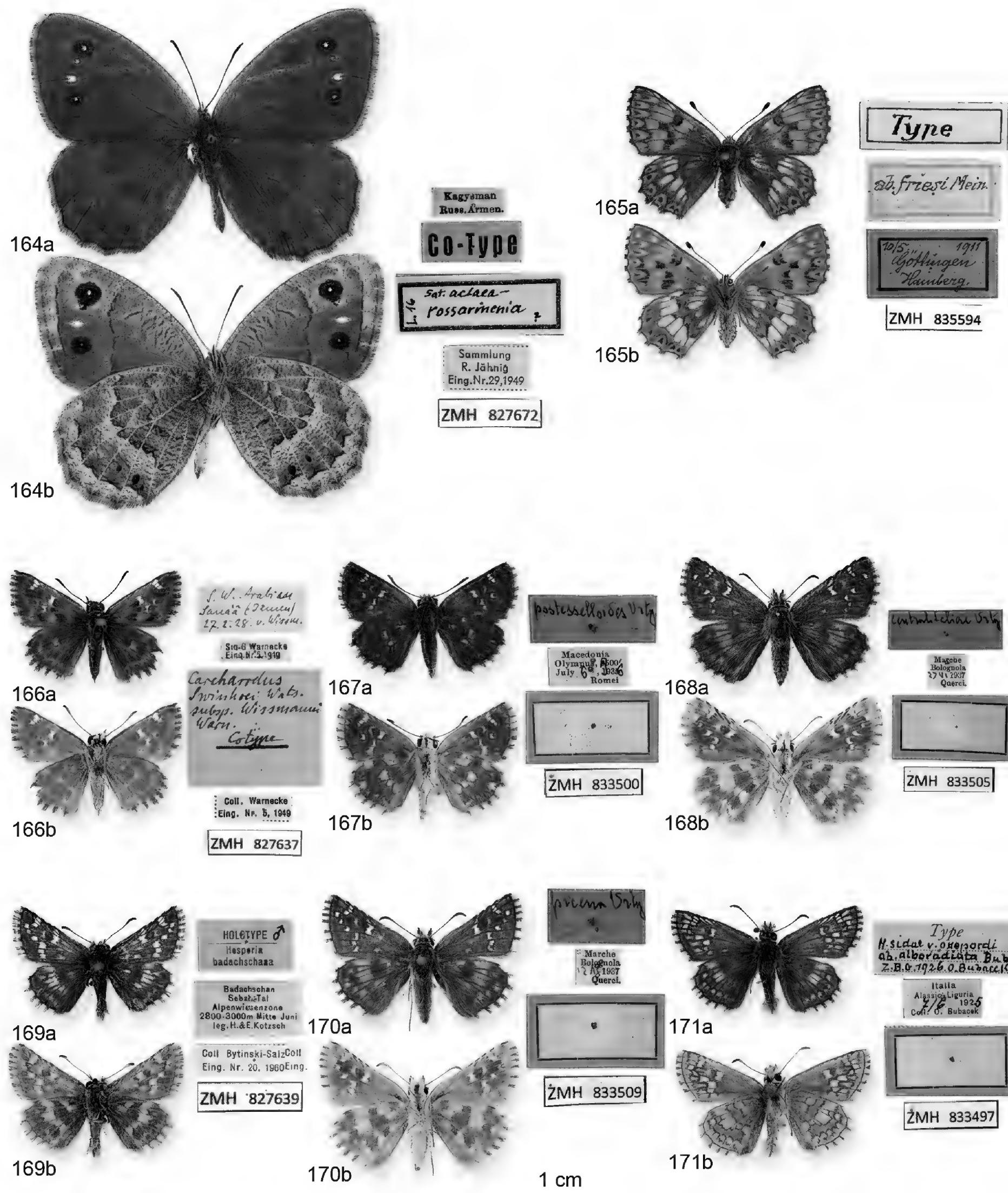
**Original material.** Labelled as “Type” 1♂ (ZMH 833497) (Fig. 171). “Type / *H. sidae* v. *onopordi* / ab. *alboradiata* Bub. / Z. B. G. 1926 O. Bubacek” // “Italia / Alassio – Liguria / 7/6 1925 / Coll. O. Bubacek” // [blank label] // “ZMH 833497”.

**Original locality.** Italy: “Alassio, Liguria”.

**Remarks.** Bubacek (1926) proposed this name as an aberration of *H. sidae* v. *onopordi* “H.-S.” (sic, recte Rambur, 1839), therefore, as stated by articles 45.6.1 and 45.6.2 (ICZN 1999) it is deemed to be an infrasubspecific name (the author used “aberration”, “ab.”, or the author expressly gave it infrasubspecific rank) and is hence unavailable. *P. onopordi* Rambur is a distinct species from *P. sidae* Esper, and both species occur sympatrically in Liguria.

## Discussion

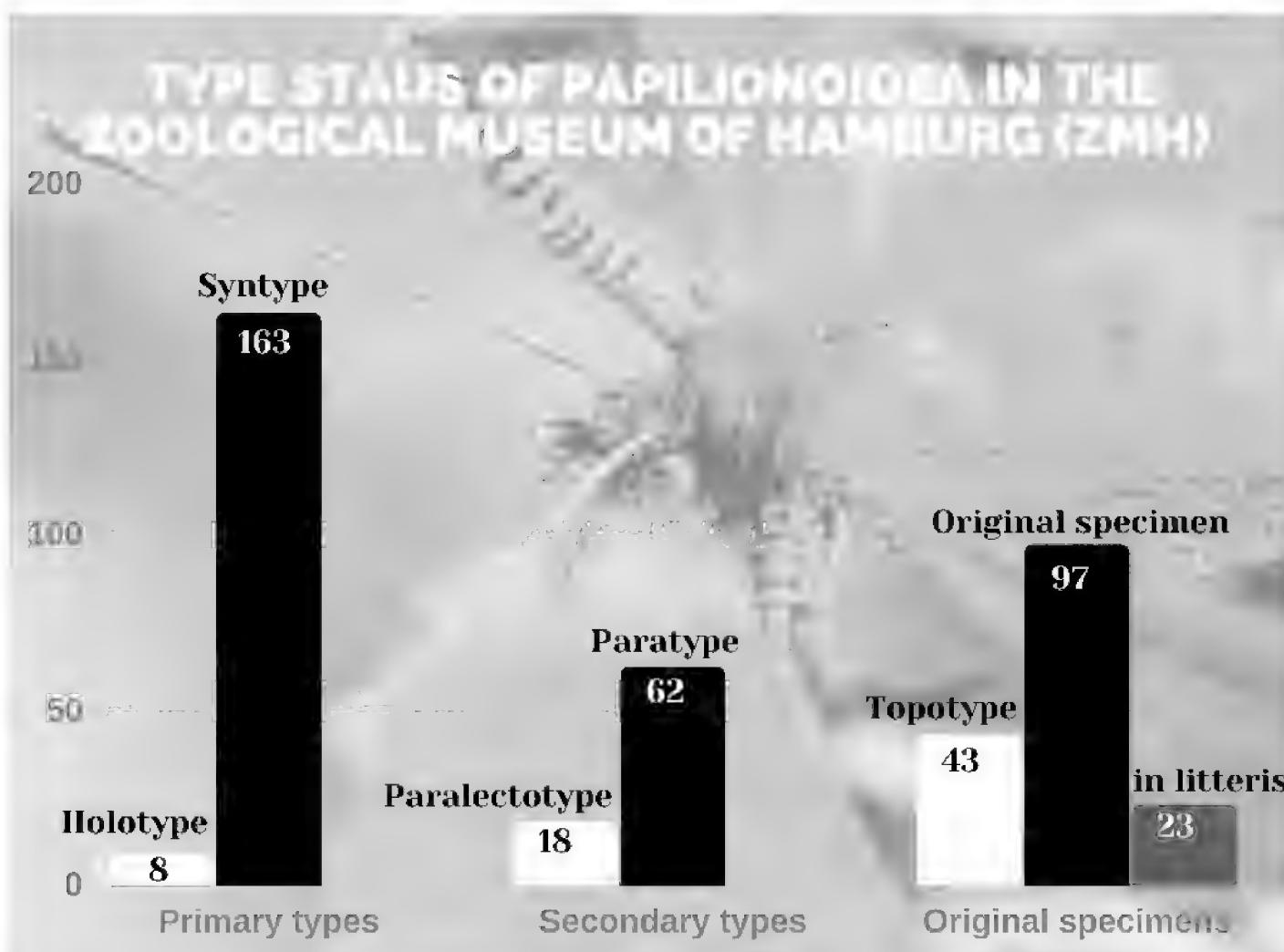
With more than 2,000 type specimens of butterflies and moths (Lepidoptera), the Zoological Museum of Hamburg (ZMH) is one of the most important natural history archives in Germany. In this catalogue, a total of 414 specimens labelled as “types” belonging to the superfamily Papilioidea are listed and discussed. This includes 23 specimens of 16 “in litteris” (= unavailable) names, 43 topotypes (non-type specimens), 97 original specimens



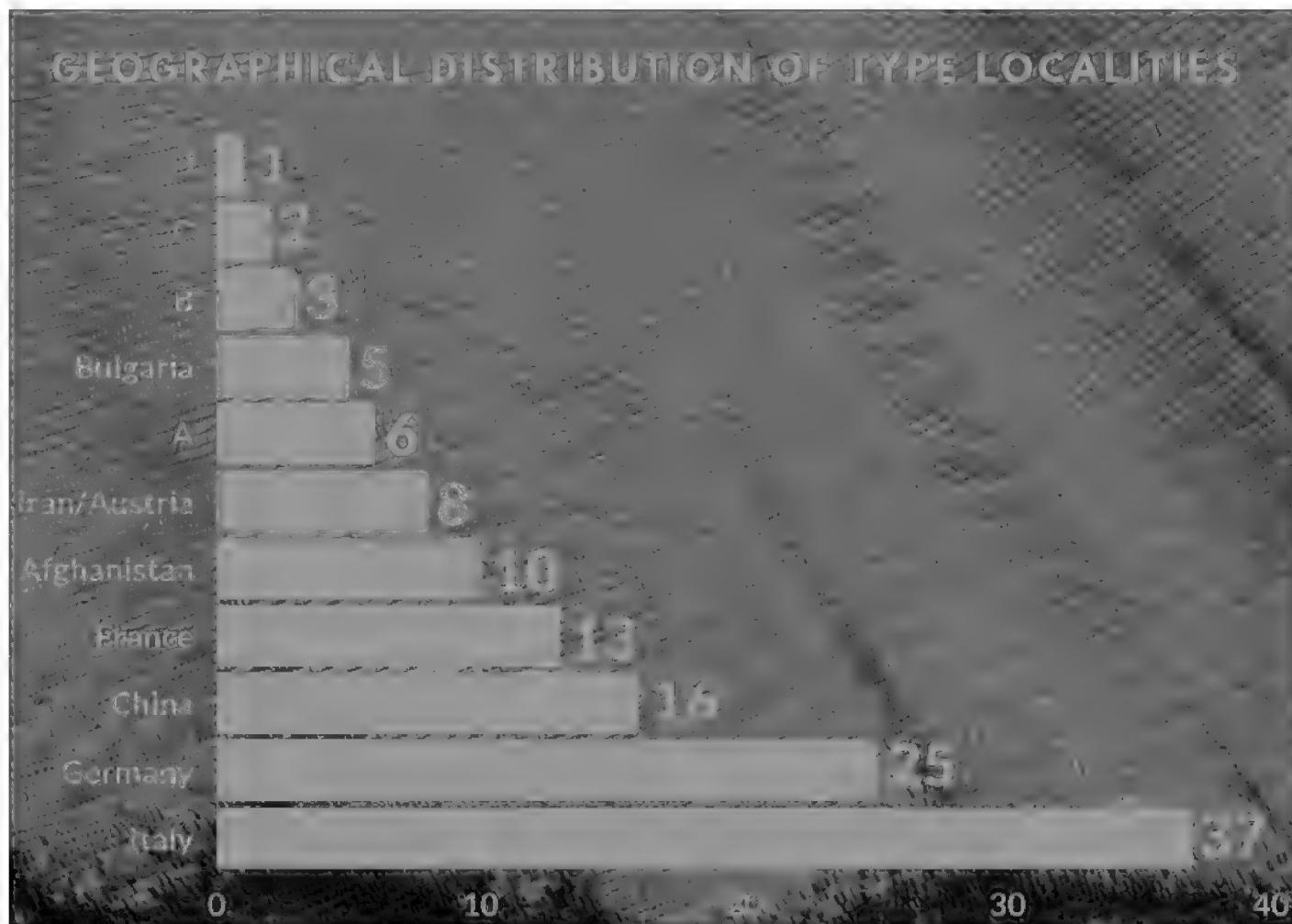
**Plate 25.** **164.** *Satyrus actaea rossarmenia* Bang-Haas; **165.** *Hamearis lucina* ab. *friesi* Meinhard; **166.** *Carcharodus alceae wissmanni* Warnecke, 1934; **167.** *Spialia orbifer orbifer* v. *postesselloides* Verity, 1938; **168.** *Pyrgus alveus centralitaliae* (Verity, 1920); **169.** *Pyrgus badachschana* (Alberti, 1939); **170.** *Pyrgus foulquieri picena* (Verity, 1920); **171.** *Pyrgus sidae* ab. *alboradiata* (Bubacek, 1926). **a.** Dorsal view, **b.** ventral view.

of invalid infrasubspecific entities under the ICZN code, and 251 type specimens (Fig. 172; Suppl. material 2: Table S2). Out of 251 type specimens, 18 specimens represent species (nine valid species), and 233 specimens are

subspecies (representing 74 subspecies: 44 valid names and 30 synonyms) (Suppl. material 1: Table S1, Suppl. material 2: S2; Fig. 172). Of these 414 specimens, 171 are primary types (8 holotypes/lectotypes and 163 syntypes),



**Figure 172.** Type status among 414 “type” specimens of the lepidopteran superfamily Papilioidea deposited in the Zoological Museum of Hamburg (ZMH).



**Figure 173.** Geographical distribution of “type” localities among 171 representative “type” specimens of the lepidopteran superfamily Papilioidea deposited in the Zoological Museum of Hamburg (ZMH). Category A (six type localities) includes Algeria, Greece, Peru and Russia; category B (three type localities) includes Switzerland, Turkey and Spain; category C (two type localities) includes Armenia, Croatia and Yemen; category D (one type locality) includes Turkmenistan, Sweden, Romania, Macedonia, Lebanon, Japan, Estonia, Czech Republic, Bosnia and Herzegovina, and Belgium.

80 are secondary types, 120 are considered of invalid infrasubspecific rank (original specimens), and 43 specimens are re-labelled as “Non-type” specimens (topotype) (Fig. 172).

The comparison of our updated catalogue to the type catalogue of Weidner (1974) reveals 95 new additions (237 specimens) to the type collection and type material of one hersperiid species (i.e., *Adopaea pfeifferi*

Bytinski-Salz & Brandt, 1937) being potentially lost (one specimen) (Suppl. material 1: Tables S1, Suppl. material 2: Table S2). The latter species is currently a junior subjective synonym of *Thymelicus hyrax* (Lederer, 1861). New additions to the type collection since the Weidner catalogue (1974) do not necessarily reflect “new type additions” in all instances. Except for a few “type” specimens donated after 1974 to the ZMH collection (e.g., from the former collection of the Altona museum), many specimens were already during Weidner’s time in the collection, but were either misidentified or misplaced. Details of the changes and updates including the new types, changes to the type status, and changes to the specimen counts since the last catalogue of Weidner (1974) were summarized in Suppl. material 1: Tables S1, Suppl. material 2: S2.

Five countries (Italy – 37, Germany – 25, China – 16, France – 13, and Afghanistan – 10) represent the majority of type localities for 60% (101 of 172 “names”) of the Papilionoidea type collection followed by Iran and Austria (each represented by 8 “type” localities), Russia, Greece, Peru and Algeria (each with 6 “type” localities) (Fig. 173). Most type specimens come from the collection of Dr. George Warnecke, mainly from Europe and the Middle East (52 taxa), followed by the collection of Dr. Hanan Bytinski-Salz (20 taxa). The oldest type specimen of Papilionoidea at ZMH is the lectotype of *Colias aurorina* ab. *crocopepla* Warnecke, 1912 collected in Amur in 1887. The oldest described types are *Parnassius mnemosyne giganteus* Staudinger, 1886 and *Parnassius nomion nominulus* Staudinger, 1894, both are valid subspecies names from the collections of H. Rödinger and G. Warnecke, respectively, followed by *Erebia flavofasciata* Heyne, 1895, a valid species from the collection of von Nolte.

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## References

- Ackery PR (1973) A list of the type specimens of *Parnassius* (Lepidoptera: Papilionidae) in the British Museum (Natural History). Bulletin of the British Museum Natural History (Ent.) 29: 1–35. [+1 pl.]
- Alberti B (1939) *Hesperia badachsiana* nov. sp. Entomologische Rundschau 56: 107–109.
- Bang-Haas O (1915) Einiges über Parnassius. Deutsche entomologische Zeitschrift Iris 29: 95, 170–175.
- Bang-Haas O (1928) Neubeschreibungen und Berichtigungen der Paläarktischen Macrolepidopterenfauna I. Entomologische Zeitschrift 42: 59–61.
- Bang-Haas O (1933) Neubeschreibungen und Berichtigungen der Paläarktischen Macrolepidopterenfauna VI. Entomologische Zeitschrift 47: 97–100.
- Bang-Haas O (1939) Neubeschreibungen und Berichtigungen der Paläarktischen Macrolepidopterenfauna XXXVIII. Deutsche entomologische Zeitschrift Iris 53: 49–60.
- Berger L (1936) Variations et aberrations de Lépidoptères. Lambillionea 36: 199–200.
- Brandt W (1938) Beitrag zur Lepidopteren-Fauna von Iran. Neue Gattungen, Arten und Formen (Macrolepidoptera). Entomologische Rundschau 55: 671–675.
- Bryk F (1912) "Parnassiana", V. Zur Synopsis der asiatischen Mnemosyne Soc. Ent. 27(5): 24–25, (8): 38–40, (10): 48–49, (11): 52–43, (16): 71–74, (20): 87–89, (22): 99–101.
- Bryk F (1934) Parnassiologische Studien aus England. Parnassiana 3: 27–28.
- Bryk F, Eisner C (1932) Beschreibung der von Herrn O. Bang-Haas i.I. aufgestellten Rassen von *P. nomion* F. d. W. Parnassiana 2: 26–27.
- Bryk F, Eisner C (1937) Eine Parnassius-Ausbeute aus der Burchan-Budhakette. Parnassiana 4: 57–58.
- Bubacek O (1923) Sammelausbeute aus Korsika. Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien 72: (28)–(34).
- Bubacek O (1926) Bericht der Sektion für Lepidopterologie. Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien 76: 173–174.
- Bubacek O (1926) Saramelergebnisse in den Pyrenäen. Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien 74–75: (6)–(10).
- Bytinski-Salz H, Brandt W (1937) New Lepidoptera from Iran. Entomologist's Record 49 Suppl. (1)–(9).
- Dannehl F (1921) Die Macrolepidopteren der Umgebung von Beuerberg und des unteren Loisachtals. Mitteilungen der Münchner Entomologischen Gesellschaft 11: 32–44.
- Dannehl F (1925) Neue Formen und Lokalrassen. Auszüge aus den Arbeiten über die Ergebnisse meiner Sammelreisen 1914 bis 1924. Entomologische Zeitschrift 39: 5–7.
- Dannehl F (1927) Neue Formen und geographische Rassen aus meinen Rhopaloceren-Ausbeuten der letzten Jahre. Mitteilungen der Münchner Entomologischen Gesellschaft 17: 1–8.
- Dannehl F (1929) Neue Formen und geographische Rassen aus meinen Ausbeuten und Erwerbungen der letzten Jahre. Mitteilungen der Münchner Entomologischen Gesellschaft 19: 97–116.
- de Sagarra I (1926) Anotacions a la lepidopterologia ibèrica IV. Butlletí de la Institució Catalana d'Història Natural (2)6: 128–139.
- Dey L-S, Husemann M (2018a) An annotated catalogue of the types of bush-crickets and crickets (Orthoptera, Ensifera) housed in the Zoological Museum Hamburg (ZMH). Evolutionary Systematics 2: 115–124. <https://doi.org/10.3897/evolsyst.2.27030>
- Dey L-S, Husemann M (2018b) An annotated catalogue of the types of short-horned grasshoppers (Orthoptera, Caelifera) housed in the Zoological Museum Hamburg (ZMH). Evolutionary Systematics 2: 21–30. <https://doi.org/10.3897/evolsyst.2.22127>

- Dirzo R, Young HS, Galetti M, Ceballos G, Isaac NJB, Collen B (2014) Defaunation in the Anthropocene. *Science* 345: 401–406. <https://doi.org/10.1126/science.1251817>
- Eisner C (1928) Eine neue spanische apollo-Rasse, *Parnassius apollo* forma kricheldorfii (m.). *Internationale Entomologische Zeitschrift* 22: 309–311.
- Eitschberger U, Steiniger H (1975) Die Geographische Variation von *Eumedonia eumedon* (Esper, 1780) in der westlichen Palaearktis (Lep. Lycaenidae). *Atalanta* 6(1): 84–125.
- Erschoff NG (1874) Lepidoptera. In: Fedschenko AP (Ed.) *Travels in Turkestan*. St. Petersburg, 127 pp. [in Russian]
- Forster W (1937) Liste der von H. und E. Kotzsch im Hindukusch erbeuteten Lycaeniden. *Mitteilungen der Münchner Entomologischen Gesellschaft* 27: 57–64.
- Fruhstorfer H (1918) Altes und Neues über Erebien. *Archiv für Naturgeschichte* 84(A7): 83–108.
- Fuchs W von (1954) Tagfalter (Lep., Rhopal.). In: Titschak E (Ed.) *Beiträge zur Fauna Perus*. G. Fischer, Jena, 4–4.
- García-Barros E, Munguira M, Stefanescu C, Vives MA (2013) Lepidoptera Papilionoidea. In: Ramos MA et al. (Eds) *Fauna Ibérica*, vol. 37. Museo Nacional de Ciencias Naturales, CSIC. Madrid, 216 pp. [ISBN: 978-84-00-09726-4]
- Gelpke H (1929) Neue Beiträge zur Kenntnis der Großschmetterlingsfauna des Lötschentales. *Internationale Entomologische Zeitschrift* 23: 121–126.
- Glaubrecht M (2018) Back to the future: The Centrum für Naturkunde on its way toward re-establishing a Natural History Museum in Hamburg. In: Beck LA (Ed.) *Zoological Collections of Germany – The Animal Kingdom in its Amazing Plenty at Museums and Universities*. Springer International, Cham, 435–461. [https://doi.org/10.1007/978-3-319-44321-8\\_35](https://doi.org/10.1007/978-3-319-44321-8_35)
- Goltz Hvd (1914) *Erebia epiphron vogesiaca*. Deutsche entomologische Zeitschrift Iris 28: 107–119. <https://doi.org/10.1002/mmnd.48019140204>
- Goltz Hvd (1937) *Erebien* aus dem Hindukusch. *Entomologische Rundschau* 54: 357–364.
- Gradl F (1933) *Coenonympha oedipus* F. in Vorarlberg und Liechtenstein. *Internationale Entomologische Zeitschrift* 27: 257–264.
- Grieshaber J, Lamas G (2007) A Synonymic list of the genus *Colias* Fabricius, 1807 (Lepidoptera: Pieridae). *Mitteilungen der Münchner Entomologischen Gesellschaft* (97) 131–171.
- Harms D, Dupérré N (2018) An annotated type catalogue of the camel spiders (Arachnida: Solifugae) held in the Zoological Museum Hamburg. *Zootaxa* 4375: 1–58. <https://doi.org/10.11646/zootaxa.4375.1.1>
- Hartig F (1940) Contributo alla conoscenza della fauna lepidotterologica dell'Italia Centrale. *Memorie della Società Entomologica Italiana* 18: 186–198.
- Heikkilä M, Kaila L, Mutanen M, Peña C, Wahlberg N (2012) Cretaceous origin and repeated tertiary diversification of the redefined butterflies. *Proceedings of the Royal Society B: Biological Sciences* 279(1731): 1093–1099. <https://doi.org/10.1098/rspb.2011.1430>
- Heyne A (1895) [Untitled]. In: Rühl F, Heyne A (Eds) *Die palaearktischen Grossschmetterlinge und ihre Naturgeschichte*. Leipzig, E. Heyne, 1, 385–857.
- Higgins LG (1941) An illustrated catalogue of the Palearctic *Melitaea* (Lep. Rhopalocera). *Transactions of the Royal Entomological Society of London* 91(7): 175–365. <https://doi.org/10.1111/j.1365-2311.1941.tb01045.x>
- Higgins LG (1955) A descriptive Catalogue of the genus *Mellicta* Billb. (Lep., Nymphalidae) and its species, with supplementary notes on the genera *Melitaea* and *Euphydryas*. *Transactions of the Royal Entomological Society of London* 106(1): 1–123. <https://doi.org/10.1111/j.1365-2311.1955.tb01262.x>
- Hirschke H (1903) Eine neue Form der *Lycaena Argades* Pall. *Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien* 53: 270.
- Hirschke H (1910) Neue Aberrationen paläarktischer Lepidopteren. *Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien* 60: 411.
- Horch R (1932) Eine neue Aberration von *Araschnia levana* L. gen. aest. *prorsa* L. *Internationale Entomologische Zeitschrift* 26: 337–338. [Guben (1 Art)]
- ICZN (1999) *International Code of Zoological Nomenclature*. Fourth edition. London. [available online at <http://www.iczn.org/iczn/index.jsp>]: International Trust for Zoological Nomenclature.
- Kawahara AY, Breinholt JW (2014) Phylogenomics provides strong evidence for relationships of butterflies and moths. *Proceedings of the Royal Society B: Biological Sciences* 281(1788): e20140970. <https://doi.org/10.1098/rspb.2014.0970>
- Kitt M (1927) Typen, Cotopen und Anderes. *Zeitschrift des Österr Entomologen-Vereines* 12: 89–92.
- Kolar Q (1937) *Lambillionea* 37: e97.
- Kotzsch H (1932) Ueber eine neue *Parnassius*-Form. *Entomologische Zeitschrift* 45: 267.
- Kotzsch H (1936) Die Parnassier meiner Hindukusch-Expedition 1936. *Parnassiana* 4: 4–9.
- Kotzsch H (1936) Neue *Colias*formen meiner Hindukusch-Expedition 1936. *Entomologische Rundschau* 54: 44–45.
- Kotzsch H (1937) Weitere Falterneuheiten aus meiner Hindukusch-Expedition 1936. *Entomologische Rundschau* 55: 9–10.
- Kotzsch H (1940) *Parnassius inopinatus*, eine überraschende neue Art. *Entomologische Zeitschrift* 54: 17–21.
- Kudrna O (1983) An annotated catalogue of the butterflies named by Roger Verity. *Journal of Research on the Lepidoptera* 21(1): 1–105.
- Kudrna O (2019) Distribution of Butterflies and Skippers in Europe (Lepidoptera: Rhopalocera, Grypocera). 24 years Mapping European Butterflies (1995–2019), Final Report. Společnost pro Ochrannu Motýlů, Prachatice, CZ, 363 pp.
- Macià R, Muñoz-Batet J, López BC, Masó G (2015) Designació del lectotípus de *Melitaea ignasiti* Sagarra, 1926 (Lepidoptera: Nymphalidae: Nymphalinae). *Butlletí de la Institució Catalana d'Història Natural* 79: 141–143.
- Marschner H (1911) *Parnassius apollo*. L. vom schweizerischen Jura. *Deutsche entomologische Zeitschrift Iris* 25: 129–131.
- Osthelder L, Pfeiffer E (1932) Lepidopteren-Fauna von Marasch in türkisch Nordsyrien (Fortsetzung). *Mitteilungen der Münchner Entomologischen Gesellschaft* 22: 17–32, 38–51.
- Pagenstecher A (1908) *Parnassius apollo* L. im Jura. *Entomologische Zeitschrift* 22: 185–187.
- Paulus HF, HW Krenn (1996) Comparative morphology of the butterfly proboscis and its sensilla – A contribution to the phylogenetic systematics of Papilionoidea (Insecta, Lepidoptera). *Journal of Zoological Systematics and Evolutionary Research* 34(4): 203–216. <https://doi.org/10.1111/j.1439-0469.1996.tb00826.x>
- Reisser H (1927) Eine neue Argynnismform aus der Sierra Nevada. *Internationale Entomologische Zeitschrift Guben* 20: 373–375.
- Sartori M, Kubiak M, Rajaei ShH (2016) An updated list of type material of Ephemeroptera Hyatt & Arms, 1890, deposited at the

- Zoological Museum of Hamburg (ZMH). ZooKeys 607: 49–68. <https://doi.org/10.3897/zookeys.607.9391>
- Schawerda K (1906) Versammlung der Sektion für Lepidopterologie. IX. Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien 56: 651.
- Schawerda K (1926) *Argynnis pandora* Schiff, var. nov. *cyrnea*. Zeitschrift des Österreichischen Entomologischen Vereins 11: 109–111.
- Schoenfeld O (1924) Einige interessante Aberration meiner Sammlung und anderes aus meiner Sammelpraxis. Internationale Entomologische Zeitschrift 18: 40–41.
- Schlutz A (1912) Fünf neue *Mimacraea*-Formen aus dem tropischen Westafrica. Entomologische Rundschau 29: 49–50.
- Schwingenschuss L (1939) Beitrag zur Lepidopterenfauna von Iran (Persien) insbesondere des Eibursgebirges in Nordiran. (Fortsetzung). Entomologische Zeitschrift 53: 62–64.
- Sheljuzhko L (1928) *Parnassius bremeri amguensis* (subsp. nov.) – ein vermutliches Bindeglied zwischen *P. bremeri* Brem. und *P. phoebus* F. Mitteilungen der Münchner Entomologischen Gesellschaft 18: 1–9.
- Sheljuzhko L (1935) Zwei neue Parnassius-Rassen aus Transkaukasien Zs. Öst. EntVer. 20: 22–24. [pl. 2.]
- Simões MVP, Husemann M, Sekerka L (2021) A Catalog of the Tortoise Beetle (Coleoptera: Chrysomelidae: Cassidinae) Collection Deposited in the Zoological Museum Hamburg (ZMH). The Coleopterists Bulletin 75(1): 191–210. <https://doi.org/10.1649/0010-065X-75.1.191>
- Sommerer M (2002) To agree or not to agree – the question of gender agreement in the International Code of Zoological Nomenclature. Nota lepidopterologica 25: 191–204. <http://biodiversitylibrary.org/page/41371966>.
- Stauder H (1913) Lepidopterologische Ergebnisse zweier Sammelreisen in den algerischen Atlas und die nördliche Sahara. Zeitschrift für wissenschaftliche Insektenbiologie Berlin 9: 289–294.
- Stauder H (1914) Eine Sammelreise nach Unteritalien. Beitrag zur Kenntnis der Lepidopterenfauna der sorrentinischen Halbinsel und des Cocuzzo-Massivs in Calabrien. Zeitschrift für wissenschaftliche Insektenbiologie Berlin 10: 369–379.
- Stauder H (1915) Eine Sammelreise nach Unteritalien. Beitrag zur Kenntnis der Lepidopterenfauna der sorrentinischen Halbinsel und des Cocuzzo-Massivs in Calabrien. Zeitschrift für wissenschaftliche Insektenbiologie Berlin 11: 1–7.
- Stauder H (1915) Neue mediterrane Lepidopterenformen. Deutsche entomologische Zeitschrift Iris 29: 20–34.
- Stauder H (1916) Lepidopteren aus dem Aspromontegebirge. Material zu einer Zusammenstellung der südkalabrischen Schmetterlingsfauna. Zeitschrift für wissenschaftliche Insektenbiologie Berlin 12: 59–63.
- Stauder H (1918) Eine Sammelreise nach Unteritalien. Zeitschrift für wissenschaftliche Insektenbiologie Berlin 14: 55–58.
- Stauder H (1921) Neues aus Unteritalien. Deutsche entomologische Zeitschrift Iris 35: 26–31.
- Stauder H (1921) *Parnassius apollo oenipontanus*, n.subsp. Entomologischer Anzeiger 1: 123–124.
- Stauder H (1922) Bausteine zur Lepidopterenfauna des Salz-kammergutes. Entomologischer Anzeiger 2: 43–47.
- Stauder H (1922) Neue Palaearktenformen 1. Mitteilungen der Münchner Entomologischen Gesellschaft 12: 17–25.
- Stauder H (1923) Die Schmetterlingsfauna der illyro-adriatischen Festland- und Inselzone, {Faunula Illyro-Adriatica}. Zeitschrift für wissenschaftliche Insektenbiologie Berlin 18: 58–68.
- Staudinger O (1886) Centralasiatische Lepidopteren Stett. Entomologische Zeitschrift 47(4–6): 193–215, (7–9): 225–256.
- Staudinger O (1894) Neue Lepidopteren-Arten und Varietäten aus dem paläarktischen Faunengebiet. Deutsche entomologische Zeitschrift Iris 7(2): 241–296.
- Tschauner W (1926) Eine neue Lokal-Variation von *Vanessa urticae* L. Internationale Entomologische Zeitschrift 20: 229–230, 273.
- Turati E (1918) Variabilità Del *Parnassius apollo pumilus* Stich. e ricerche sull'origine dei *Parnassius* (Note Biologico-Critiche). Atti della Società italiana di scienze naturali 57: 28–89.
- Turati E (1923) Cinque anni di ricerche nell'Appennino modense (Note di Lepidotteroologia). Elenco dei Lepidotteri raccolti e note critiche e descriptive. Atti della Società italiana di scienze naturali 62: 4–74.
- Tutt JW (1909) A Natural History of the British Lepidoptera: a textbook for students and collectors. London, X, 410 pp.
- van Nieukerken EJ, Kaila L, Kitching IJ, Kristensen NP, Lees DC, Minet J, Mitter C, Mutanen M, Regier JC, Simonsen TJ, Wahlberg N, Yen S-H, Zahiri R, Adamski D, Baixeras J, Bartsch D, Bengtsson BÅ, Brown JW, Bucheli SR, Davis DR, De Prins J, De Prins W, Epstein ME, Gentili-Poole P, Gielis C, Hättenschwiler P, Hausmann A, Holloway JD, Kallies A, Karsholt O, Kawahara AY, Koster SJC, Kozlov MV, Lafontaine JD, Lamas G, Landry J-F, Lee S, Nuss M, Park K-T, Penz C, Rota J, Schintlmeister A, Schmidt BC, Sohn J-C, Solis MA, Tarmann GM, Warren AD, Weller S, Yakovlev RV, Zolotuhin VV, Zwick A (2011) Order Lepidoptera Linnaeus, 1758. In: Zhang Z-Q (Ed.) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. Zootaxa 3148: 212–221. <https://doi.org/10.11646/zootaxa.3148.1.41>
- van Nieukerken EJ, Karsholt O, Hausmann A, Holloway JD, Huemer P, Kitching IJ, Nuss M, Pohl GR, Rajaei H, Rennland E, Rodeland J, Rougerie R, Scoble MJ, Sinev SYu, Sommerer M (2019) Stability in Lepidoptera names is not served by reversal to gender agreement: a response to Wiemers et al. (2018). Nota Lepidopterologica 42(1): 101–111. <https://doi.org/10.3897/nl.42.34187>
- van Oorschot H, Coutsis JG (2014) The genus *Melitaea* Fabricius, 1807 (Lepidoptera, Nymphalidae, Nymphalinae). Taxonomy and systematics with special reference to the male genitalia. Tshikolovets Publications, Pardubice, 360 pp.
- Verity R, Querci O (1923) Races and Seasonal Polymorphism of the Grypocera and of the Rhopalocera of Peninsular Italy. Entomologist's Record 35 Suppl. (1)–(20).
- Verity R (1913) Contributo allo studio della variazione nei Lepidotteri tratto principalmente de materiale de Toscana, della Marche e di Calabria. Bollettino della Società Entomologica Italiana 45: 203–238.
- Verity R (1914) Le variazioni geografiche della „*Lycaena coridon*“ Poda Nell'Italia centrale. Bollettino della Società Entomologica Italiana 46: 128–133.
- Verity R (1919) Seasonal Polymorphism and Races of Some European Grypocera and Rhopalocera. Entomologist's Record 31: 193–201.
- Verity R (1920) Seasonal Polymorphism and Races of Some European Grypocera and Rhopalocera. Additional Notes. Entomologist's Record 32: 3–8, 140–152.
- Verity R (1936) The Butterfly races of Macedonia. Entomologist's Record 48 Suppl. (1)–(8).

- Verity R (1937) Variation of *Eumenis allionii*, G.H. = *fatua*, Freyer. Entomologist's Record 49: 99–101.
- Verity R (1938) Supplement to the „Butterfly races and Zygaenae of Macedonia“. Entomologist's Record 50 Suppl. (4)–(8).
- Verity R (1938) Revision of the athalia group of the genus *Melitaea* Fabricius, 1807 (Lepidopt., Nymphalidae). Transactions of the Royal Entomological Society of London 89(14): 591–702. <https://doi.org/10.1111/j.1365-2311.1940.tb00428.x>
- Vorbrodt K (1911) Die Schmetterlinge der Schweiz. Bern, I: 489 pp.
- Wahlberg N, Leneveu J, Kodandaramaiah U, Peña C, Nylin S, Freitas AVL, Brower AVZ (2009) Nymphalid butterflies diversify following near demise at the Cretaceous/Tertiary boundary. Proceedings of the Royal Society Series B Biological Sciences 276: 4295–4302. <https://doi.org/10.1098/rspb.2009.1303>
- Warnecke G (1912) Drei neue Formen von *Colias aurora* Esp. Soc. Ent. 27: 68.
- Warnecke G (1919) *Satyrus arethusa* Schiff. nov. subsp. *alphea* Warn. Internationale Entomologische Zeitschrift 12: 182.
- Warnecke G (1924) Doerriesia, Bemerkungen über ostasiatische und sibirische Groß-schmetterlinge. Deutsche entomologische Zeitschrift Iris 38: 149–158.
- Warnecke G (1924) *Papilio podalirius* L. n. f. *ornatissima* Warn. Internationale Entomologische Zeitschrift 18: 157.
- Warnecke G (1929) Eine neue *Pararge*-Art aus Süd-Arabien: *Pararge felix* n. spec. Warn. (Lep. Rhopal.). Internationale Entomologische Zeitschrift 22: 365–367. <https://doi.org/10.1002/mmnd.48019290204>
- Warnecke G (1934) Ein zweiter Beitrag zur Kenntnis der Macro-lepidopteren-Fauna Südwest-Arabiens (Fortsetzung). Mitteilungen der Münchner Entomologischen Gesellschaft 24: 19–20.
- Warnecke G (1942) Einige Falteraberrationen aus der Nordmark. Deutsche entomologische Zeitschrift Iris 56: 102–103.
- Warnecke G (1944) Grundsätzliches über Rassen bei Lepidopteren. (Die Rassenbildung von *Satyrus semele* L.). Deutsche entomologische Zeitschrift Iris 57: 28–41.
- Warnecke G (1959) Das Landkärtchen, *Araschnia laevana* L. (Lep. Rhop.) in Schleswig-Holstein. — Mitt. faun. Arb.gem. Schlesw.-Holst., Hamburg, Lübeck, N.F. 12(3): 53.
- Warren BCS (1933) Notes on Erebiiid Species. Entomologist's Record 45: 40–41.
- Weidner H (1962) Die Entomologischen Sammlungen des Zoologischen Staatsinstituts und Zoologischen Museums Hamburg, IV. Teil, Insecta I. Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut 60: 81–109.
- Weidner H (1974) Die Entomologischen Sammlungen des Zoologischen Instituts und Zoologischen Museums der Universität Hamburg, XI. Teil, Insecta VIII. Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut 70: 181–266.
- Weidner H (1979) Die Entomologischen Sammlungen des Zoologischen Staatsinstituts und Zoologischen Museums Hamburg, Nachtrag zum IX. Teil: Insecta VI. Mitteilungen Hambg. Zoolgischen Museum und Institut 76: 395–468.
- Wiemers M, Balletto E, Dincă V, Fric ZF, Lamas G, Lukhtanov V, Munguira ML, van Swaay CAM, Vila R, Vliegenthart A, Wahlberg N, Verovnik R (2018) An updated checklist of the European Butterflies (Lepidoptera, Papilionoidea). ZooKeys 811: 9–45. <https://doi.org/10.3897/zookeys.811.28712>
- Zerny H (1932) Lepidopteren aus dem nördlichen Libanon. Deutsche entomologische Zeitschrift Iris 46: 186–187.
- Züllich R (1929) Einige neue Lycaenidenformen aus meiner Sammlung. Zeitschrift des Österreichischen Entomologischen Vereins 14: 51–53.
- Züllich R (1936) Beitrag zur Macrolepidopterenfauna des Rilogeberges in Bulgarien. Zeitschrift des Österreichischen Entomologischen Vereins 21: 24–28.
- Zahiri R, Tarmann G, Efetov KA, Rajaei H, Fatahi M, Seidel M, Jaenicke B, Dalsgaard T, Sikora M, Husemann M (2021) An illustrated catalogue of the type specimens of Lepidoptera (Insecta) housed in the Zoological Museum Hamburg (ZMH): Part I. superfamilies Hepialoidea, Coccoidea, and Zygaenoidea. Evolutionary Systematics 5(1): 39–70. <https://doi.org/10.3897/evolsyst.5.62003>

## Supplementary material 1

### Table S1

Authors: Reza Zahiri, Vazrick Nazari, Hossein Rajaei, Martin Wiemers, Maryam Fatahi, Matthias Seidel, Thure Dalsgaard, Martin Husemann

Data type: excel table

Explanation note: List of the 171 representative “type” specimens of the lepidopteran superfamily Papilionoidea deposited in the Zoological Museum of Hamburg (ZMH).

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Link: <https://doi.org/10.3897/evolsyst.5.63435.suppl1>

## Supplementary material 2

### Table S2

Authors: Reza Zahiri, Vazrick Nazari, Hossein Rajaei, Martin Wiemers, Maryam Fatahi, Matthias Seidel, Thure Dalsgaard, Martin Husemann

Data type: excel table

Explanation note: List of the 414 “type” specimens of the lepidopteran superfamily Papilionoidea deposited in the Zoological Museum of Hamburg (ZMH).

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